

QuickVision DICOM

User manual



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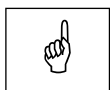
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Sommario

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Present Icon in the manual



It points out one "NOTE"; particular attention recommend in the reading of the topics identified with such icon.



It points out one "ADVICE"; the topics identified with this icon concern the safety aspects of the patient and/or of the operator.



0051 This symbol certifies that the product "QuickVision DICOM" is conforming to the European directive 93/42 CEE, as modified from 2007/47/CE.

QuickVision DICOM is a medical active device, not invasive type, in IIA class according to the above mentioned directive.

QuickVision DICOM is produced by:

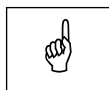
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Email: support@archimed.org

1. INTRODUCTION



NOTE:

The manual is updated to the state of the product with which it is sold for guaranteeing to the consumer a suitable reference in the use of the instrument and every aspect to the safety of use. The manual would be not reflected variations of product deprived of impact on the operational formalities and on the safety of use

INTRODUCTION

First of all we would to congratulated for your purchase. This software is the most complete, tastefully and at the same time simple to use, that is available on the market, for the management of the Dental cabinet and for the filing of digital imagines.



NOTE:

QuickVision Dicom® is supplied in different versions that foresee the functionality of procedures defined "advanced". Some functionalities listed in the manual are present only in the supplied modules as additional option. Inside this manual, it is indicated if the described function is not included in the basic version.

This software will permits you to manage all the data of the Dental cabinet in a very simple and intuitive way. Moreover, QuickVision Dicom® integrates calls to the acquisition software of many electronic devices: video radio X-Ray system, telecameras, digitals panoramic, scanners, cameras, slides scanner, etc.

The list of digital systems connected to QUICKVISION DICOM is contained in Appendix 1- Digital sensors can be connected to Quickvision DICOM.

The full version of the program includes management of:

Patient File
 Electronic and paper documents: informed consent, medical history, consent implant, etc..
 Clinical Diary
 Clinical treatment plan
 Price customizable performance
 Customizable calendar appointments
 Unlimited number of actors and agendas
 Archive for differentiated medical patients (password protected)
 Suppliers, Warehouse, First note, Financial Statement Analysis
 Banks, Schedule
 Invoices and Documents
 Diary of the clinical target
 Folders Specialities: periodontal, orthodontic
 Image Management
 Scanning directly from most popular videoradiography systems
 Processing of images from CT or CBCT
 ...and so on.

All the acquired images, independently from their origin, are automatically saved as acquired by the software of the different devices. You can create a sequential archive for your images, or you can group them to obtain systematics and photographic album.

With maths filters, you can improve the contrast or the brightness for a better analysis; you can also use the filters to exalt the edges or to transform in 3D your image and **to rotate the 3D image in real time**. The original image is always present and can be displayed in every moment. Moreover, with the virtual colorations, the few contrasted X-Ray examination results very simple.

Moreover, there are many functions to measure images: distances, angles, area, etc.

An intelligent system will you clarify in every moment, in a very detailed way, the cause of a malfunctioning or an error.

Remember that this software is fruit of the users collaboration. Please, do not hesitate to give us your councils on the use and functioning of the software, and your desire of new functionality. We should be glad to add it, if necessary, in the future versions of the program.

This software has been developed with 32 bits technology. For many users this is a negligible information, but it indicates: further reliability, exclusive use on 32/64 bits Operative System (Windows® 95, Windows® 98, Windows® ME, Windows® NT/2000/XP/Vista/7), **much more web reliability.**



NOTE:

QuickVision DICOM® can also be used on operating systems to 64 bits like Windows Vista and Windows 7. Such peculiarity is specific of the product QuickVision DICOM® and not of the devices connected to the computer. Before purchasing a computer with an operating system to 64 bits verified that the equipments to be connected to the personal computer (scanner, cameras, videoradiography system, digital panoramic, etc) foresees this possibility.



ADVICE:

The good quality of the monitor is an essential requirement for a correct diagnosis of the examination through analysis of the image. A monitor that doesn't pass the scheduled verifications (see appendix 2, "Verification of the adequacy of the monitor") is not to consider diagnostic. The use of a monitor of not diagnostic quality returns not diagnostic QuickVision DICOM® system

DESTINATION OF USE AND USER PROFILE

QuickVision DICOM is an active medical device destined to be employed on the man to help to the diagnosis, prevention, control of pathologies of the maxillo-facial complex.

- 1. The system is destined therefore to the acquisition, visualization and filing of radiographies of the maxillo-facial complex, including both the examinations of the dental arcades, included the articulations temporo-mandibular, the air sinuses, radiographies of the head in side to side projection and antero/posterior, radiographies coming from systems CT and or ConeBeamComputed Tomography (CBCT).**
- 2. The tool is destined to be used from personal qualified, dentists, radiologists or personal legally qualified.**

The typology of population of the patients depends in first place on the used equipment of radiology, without limitation type, age, etc.

USER PROFILE

The user already has basic knowledge about:

- Output of ionizing radiations
- Dangers of biological damages tied to the excessive use of ionizing radiations
- Methods to reduce the risks of excessive radiations to the patient (use of fallen protections, etc.)

It is required to the operator to have familiarity in the use of Personal Computer (PC) and relative software, so that to be able to use the present functions on the PC in easy way.

TRAINING

At the end of the installation of the system, it will follow the training of the operator both on the use of the system and of the acquisition and visualization software of the images.
The training does not ask to use particular tools.



ADVICE:

At the end of the operations of installation and training, it is obligatory to perform the verification of correct visualization of the images on the monitor in use.
The procedure is described in the appendix 2 - Controls to the installation and periodical, which it is postponed.



ADVICE:

The procedures of verification described in the appendix 2 must be performed with regularity, as described in the paragraph related to the periodic controls.

This manual describes the necessary operations to perform intraoral, panoramic and volumetric radiographies, (or 3D) with various types of digital sensors.



ADVICE:

The application of filters to the images, the calibration of the measures, the change of contrast and brightness and all the functions that modify the images, can introduce artificials that compromise the diagnosis. For this reason, QuickVision DICOM® always preserves the original copy of the image, that it is necessary to consider for the diagnosis.

UPDATE

Quickvision DICOM® is a medical device. Before a software update of the product, we invite you to observe the specified following warning.



ADVICE:

QuickVision DICOM® is a software and therefore it can be updated with special procedures without the presence of a specialized technician. QuickVision Dicom® is a medical device and the producer and/or supplier have the duty to hold trace of all the installed versions with the purpose to be able to apply possible call back following found defectiveness. For this reason, we invite you not to update the version of the software that has been delivered you if not following of a documented procedure from your supplier of reference that guarantees the traceability of the product.

WARRANTY

This software is guarantee during 90 (ninety) days after the purchase date. Producer could not be responsible for any direct or indirect damage deriving from the program use; partial or total loss of data neither.

The program is assigned in use licence and could be given to thirds parties only upon written authorization of DIGITAL imaging sas.

COMPUTER REQUIREMENTS

Minimal requirements of your computer are:

Computer system : WINDOWS® 7/WINDOWS®
VISTA/WINDOWS® XP/2000

RAM memory : 1 GB (2 GB suggested)

Video card : 1024x768 pixels to 65.000 colours (1280x1024 to 16 million of colours
to 32 bits optimized)

Hard disk : 5 GB (10 GB suggested)

Monitor : 17" (19" suggested, or higher)

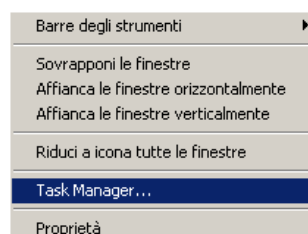
The Hard Disk size must be proportional with the archive size you create, and in particularly with the images size that you save.

Every X-Ray image need, on the HD, a space that varies between 500KB (compressed) and 4MB (not compressed). A panoramic image needs from 5MB (compressed) to 20MB (not compressed). A telecamera pic occupies from 500KB (compressed) to 2MB (not compressed). Your hard disk dimension have to be sufficient to contain the images you want to save. A TC or CBCT exams need from 100 MB to 300 MB (it depends from the resolutions).

The necessary RAM (Random Access Memory) for QuickVision DICOM® is almost of 256 MB. Windows® can manages the virtual memory, which is a RAM extension on the HD. This in case the RAM in not sufficient, Windows® uses the Hard Disk like a RAM. This operation involves a slowing down of the system, that because the hard disk is slowness than RAM.

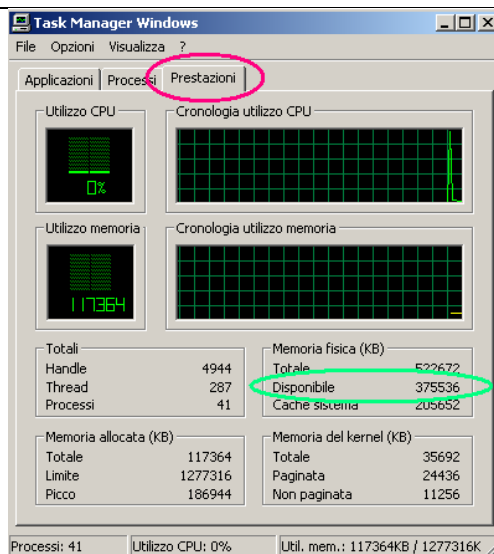
Before to run QuickVision DICOM®, please verify the memory available. In Windows Vista® proceed in the following way.

Click with the right button of the mouse, on the taskbar (it is usually displayed in the bottom of the screen). The following menu will appear:



Pic. 1.1

Select "**Task Manager**".



Pic. 1.2

Select "**Performance**".

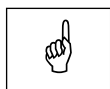
Check that the value of free "**Physical Memory**" is more than 256,000.

If it is less, the computer may become slow or may not allow proper operation of QuickVision DICOM®.

DATA SECURITY

The database created by QuickVision DICOM®, has a login password and its contents is encrypted with 128 bits technology. In this way, you can avoid unauthorized accesses.

Data security backup



NOTA:

Computer and electronic devices are subject to wear and failure. It is essential to provide for a regular data backup that prevents accidental loss of data due to malfunctions, loss or theft of storage devices.

Regularly backing up data is the only way to remedy the loss of the same due to failures, theft, or deletions made by the operator incorrectly.

Backup should be performed at least once a day. Each rescue is not intended to replace the previous one. We recommend you to organize a rescue system that functions such as the following one.

Every night at 24:00, all data is stored on a second computer or otherwise on a different hard disk from the one where the data are. Every night the rescue program (not supplied) creates a copy in an always different folder on the destination disk. After the creation of 30 different copies of the data, the program could begin to replace the older copy. In this way, you will have a chance to recover lost data for up to 30 days before.

HOW TO USE THIS MANUAL

This manual is organized in cards. Every function is presented in his use and if possible with utilize examples. Exist a paragraph **“Description”**, one **“Operation”** and one **“Additional Information”**.

Since this software uses electronics devices (computer, mouse, peripherals), are often used terminologies or specific acronyms. We apologize if the reading can result little clear, but we will here try to explain some terms used in the text.

The phrase **“move the mouse...”** means that you have to displace the monitor indicator (normally an arrow) that indicates the mouse position, in a specific zone.

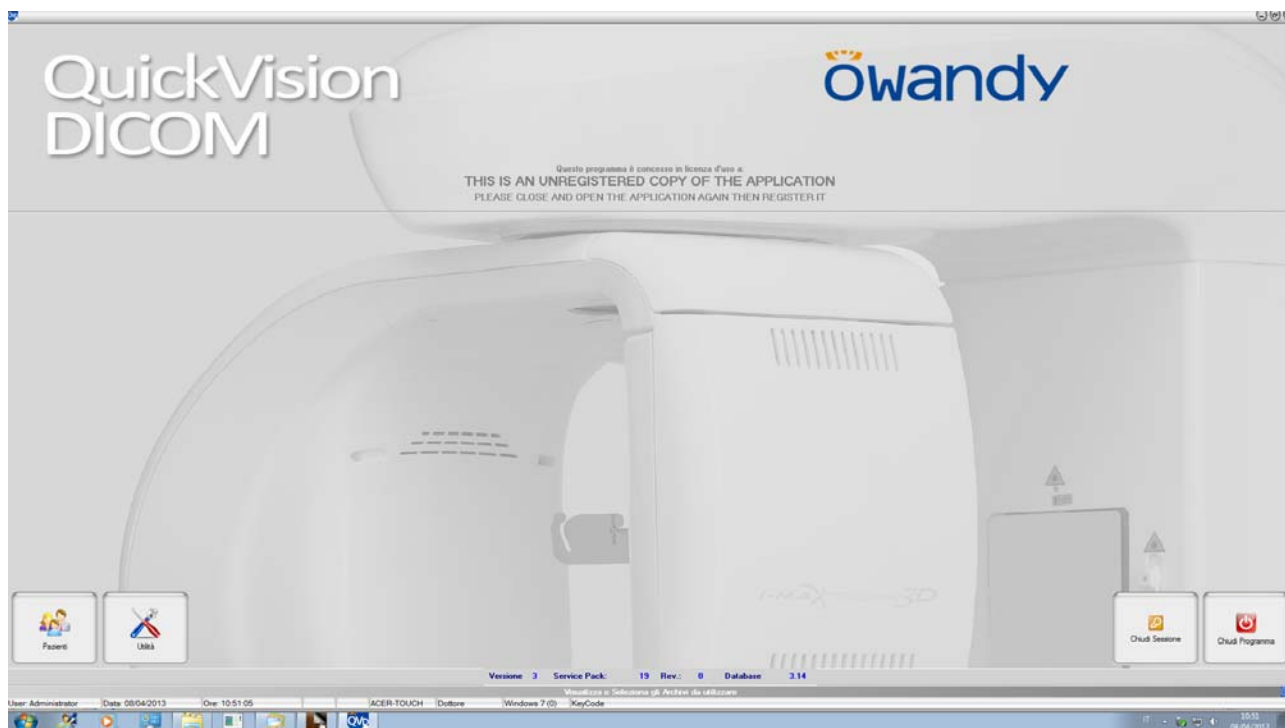
“Click with the mouse” means to bring the mouse in position, then press the right button and release it.

The **“buttons”** represent the program function that you can activate clicking with the mouse on the same.

You can also find **“To recover the image...”**; you have to open the archive window (sequential or systematic), then select the image you want to elaborate and send it, using the right buttons, to the elaborations window.

For using this software, we suggest a basilar knowledge of Windows®95 or later. If any basilar concepts are not clear (what is a window, how to recall a program, etc.) we advise you to read a little Windows® manual, or make the Windows® exercises.

SOFTWARE PRESENTATION



Pic. 1.3

Before start working with QuickVision DICOM®, you need to understand how the software has been projected and then realized.

The basilar objective for the realization of this program is the **SEMPPLICITY OF USE**. To obtain this purpose, we have started from the idea that a software is simpler to use if there are few overlapping windows it contains. It is necessary to arrange in the monitor the maximum of possible information, subdivided for argumentation.

Often, many softwares have complex and long procedures, too difficult to remember. This means that to complete a not frequently operation, it must make a big effort for find the correct way. Our objective is little clicks with the mouse to follow every procedure.

QuickVision DICOM® has been developed for a **very intuitive use**.

The main window of QuickVision Dicom® is like the picture here over. The photo can be easily personalized.

The **“Close session”** button must be utilized every times you go away from the computer; using this button you can standby the program; for being able to re-use it, it will be necessary to insert again the password, in this way, during your absence, if nobody knows the password, no one will be able to use it. This procedure guarantees the use of the software, in conformity with the new dispositions in matter of privacy protection.

The **“Close program”** button must be used to close the application.

The program is divided in three big categories: **Patients, Management (just with management module) and Utilities**. Clicking on one of this button, you will approach to three different windows: patients' registry, managerial, usefulness of the program.

These three windows contain the following button, with which you can easily back to the main menu of the program.



Pic. 1.4

It is also possible return to the main menu, pressing the **F1** button of the keyboard.

In **Patients page** (accessible pressing **F2**), you can do every operations in relation with the patient: creation, modify, waiting room (we explain you all these operations in the following chapters).

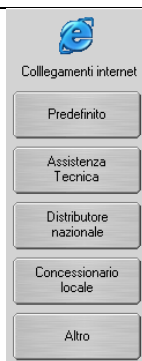
In **Management page** (just with management module; accessible pressing **F3**) there is a list of all functions that you can use with managerial module. None of those functions is included in the Images version of the software.

In **Utilities page** (accessible pressing **F4**), there are many functions of varied usefulness. We can find the program setup, the clock, the calculator, all regarding the privacy, etc.

INTERNET CONNECTIONS

You can set up links to internet pages that you use frequently, calling them directly from the program, or links to external programs. The computer uses and opens web pages with the internet exploration program (browser) installed on it. If you have not installed any browser, you will not able to use internet connections.

Go to the main program window and you will see the buttons shown in the next figure:



Pic. 1.5

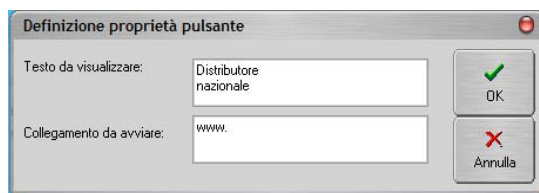
The first and the second button (**Default and Technical Support**) are preset and you can't change them.

Clicking on the first button, you will access directly to your home page setting on your Internet browser.

Clicking on the second button, you will access directly to the page <http://www.archimed.org/>.

The remaining buttons can be customized proceeding in this way.

Click with the right button of the mouse on the button that you want to customize and it will open the following window:



Pic 1.6

You just have to write a text that you want to see on the button (in the example, the text is **National dealer**) and the correspondent internet link (for instance: www.google.it)

Clicking on this button, you can now go directly on the website that you have set up.

To modify the button with another name and link, you have to proceed in the same way.

You can also link a button to a program, for example to Windows calculator. You have to write in "Link to star" field, the text `CALC.EXE`.

INTERNAL MAIL



In the main page of the program, under Internet connections buttons, there is the function

With this function, it is possible to send short text messages to the other computers of the cabinet, if you have a computers network. This kind of mail does not use an internet connection.

2. ACTIVATION

PROGRAM PROTECTION

QuickVision DICOM® is protected by an activation code or an usb dongle. You can simply verified the kind of protection used, observing the packaging of the software. If you find in the packaging an usb dongle, you know that it represents the protection of the software. If you don't find it, the protection is a software key.

ACTIVATION OF PROGRAM WITH SOFTWARE KEY

When a software key protects QuickVision DICOM®, when you start the program, you will see a window to register the software.

To start the program without registration, you have to click on **Cancel**.

In this case, you can use the software, after the installation, for a limited time. To use the software completely, you have to register it.

You have to register it, writing the data in the window that will appear automatically when you run the program for the first time.



Pic 2.1

You can register the software in two ways: by phone assistance or by fax.

1) Phone assistance: call 011-6056962 and you will be assisted in the activation process.

2) Fax: click on **Print Code**; fill in the page that you have print and send it by fax to 011-6057987. After a few minutes, you will receive by fax the access code.

You have to write clearly the cabinet's data (User name), the address and the access code that you have received.

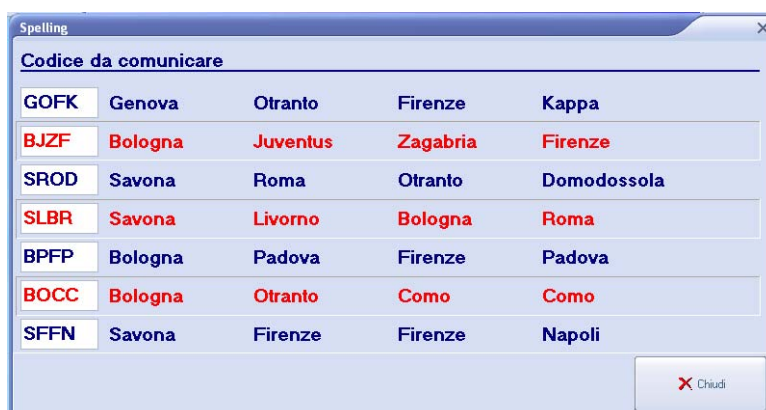
Access codes are made by seven groups of 4 letters. You have to enter them correctly to use the software in a complete way.

Pay attention when you insert User name and Address. You have to enter them as you communicated them to the call center, paying attention to capital and lowercase letters.

PHONE ACTIVATION

If you use the phone to activate the software, please remember to spell with the utmost attention the letters of the **Code to communicate**.

We suggest you to use the button ; this function will show a window that help you spelling the code.



Pic. 2.2

After you have insert the code, click on:



ATTIVAZIONE DEL PROGRAMMA CON CHIAVE USB

If you have the software with the usb dongle, when you start the program, the following window will appear:



Pic. 2.3

Please pay attention when you enter the cabinet's data, because after you save them, you will not be able to modify them. To continue without insert data, click on "Close".



AVVERTENZA:

The data entered during the activation of the program, both in the version with the software key and in the version with usb dongle, will be used for DICOM tags of the images. The lack of activation of the key or wrong data will result in the compilation of DICOM tags about cabinet's data.

3. PASSWORD MANAGEMENT

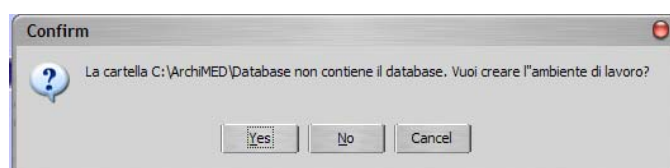
First access to the program

When you start the program for the first time, it will appear the following window:



Pic. 3.1

Click on **Ok** and the software will use the boot disk as main data disc. The following window will appear:



Pic. 3.2

Click on **Yes** and QuickVision DICOM® will automatic create the workplace to start.

If you have the previous version of QuickVision DICOM®, you will not visualize that message and the program will automatically read data used before.

NOTE:



We advise you to check that the monitor is appropriate for displaying radiographic images. This procedure run automatically the first time you enter in images module. This procedure to check monitor propriety is available in "Utilities" of images module, as in the following picture, clicking on "Verify monitor functionality".



The proceedings for this test is described in the following chapters.

Password and users management

Password: First access to the program.

When you start the program, you will see the following window:



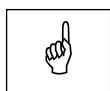
Pic. 3.3

Password: Reset database.

This button consent to reset drivers' configuration. The software will retain only the driver C.

Password: Reset password

This function consents to reset the password, bringing it to the beginning value "12345678". Only the computer's administrator can reset the password. Before that, QuickVision DICOM ask the administrator name and the password to enter in the computer (Windows' credentials). After the authentication, the software consents to reset the password. In this way, the administrator can use data if he lost the password.

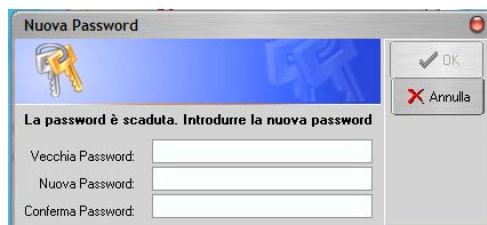


NOTA:

Only the administrator of the computer can reset the password in QuickVision DICOM. The security of data and the position of the administrator access to the database is assigned to the administrator of the network or the individual computer.

Password: Access to the program.

If you are entering in QuickVision DICOM® for the first time, the password is **12345678**; immediately the software will ask you to change it with the following window:



Pic. 3.4

You have to write the old password one time and a new password two times (you can choose the password that you want, except 12345678).

Click on **OK** and go to the window that you can see in Pic. 1.2, so write the new password in the field "Password".

Click on **Enter** to sign in the program. According to the new privacy dispositions, the software stores every access to the program.

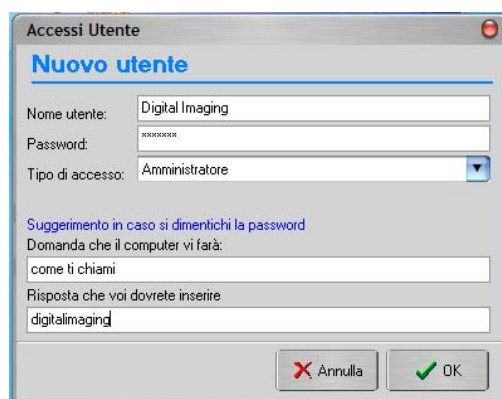
Password: Add a new user.

To add or delete a user, after the identification of the administrator, click on Maintenance (Pic. 1) and the following window will open:



Pic. 3.5

Click on **New User** and you will see the following window:



Pic. 3.6

You just have to write name, password and select the kind of access, and the program will create the new user. You can also write a question and an answer that will help you if you forget the password.

There are five kinds of user:

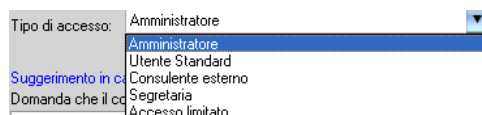
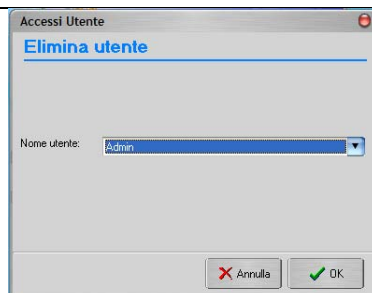


figura 3.7

The administrator can do all the operations in the program. **Standard User** can do management operations but he can't see the amounts of the transactions. The **External Consultant** can enter accounting data. **Secretary** can do management operations but she can't modify data of the program. **Limited access** can make only limited operations.

Password: Delete user.

Click on **Delete user** and you will see the following window:



Pic. 3.8

You can choose the user that you want to delete. Click on **OK** and the user selected will be deleted.

Password: Display accesses.

Click on **Display accesses register** (Pic. 3.5), you will see the following window:

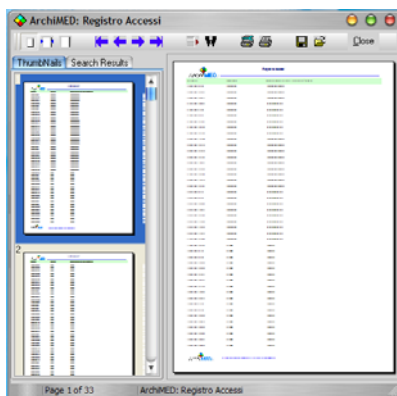
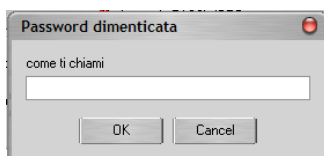


figura 3.9

In this way, you can visualize all the accesses' data: date and time, user name and computer name of the access.

Password: Forgotten password.

Click on **Forgotten password** (Pic. 3.3) and you will see the following window:

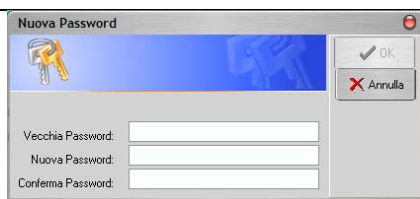


Pic. 3.10

You have only to answer to the question written during the user's creation. The program will automatically verify the question and, if it is correct, it will show the password to enter.

Password: Change password.

Click on **Change password** (Pic. 3.3) and you will see the following window:



Pic. 3.11

You have to write the old password one time and a new password two times (you can choose the password that you want, except 12345678).
Click on **OK** and go to the window that you can see in Pic. 3.3, so write the new password in the field "Password".

4. DRIVES MANAGEMENT

Drives management

One of the news of this software is the **possibility of multi-task work**. This option makes QuickVision DICOM® the most exclusive software.

What does it mean to work contemporary on different drives

It means that you can subdivide the archives on more drives with the possibility to see all of them contemporary.

Example.

If you want to let on the net drive (drive S) only the patients under treatment at the moment, you can save them on **drive S**. All the others patients, for example the historical ones, can be saved on **drive T** (general drive). QuickVision DICOM® can use all the archive (until 20 drives) contemporary.

To distinguish patients from different archives, each patient of the list will have the colour selected for the archive in which he is stored.

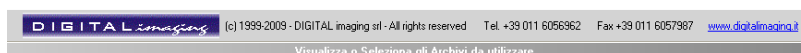
Drives management: Add a drive.

To add a new drive to QuickVision DICOM®, you have to go in the main page of the program.



Pic. 4.1

Click on **Display or select database to use** or on the double arrow in the bottom of the window:



Pic. 4.2

The window will open as in the following picture:



Pic. 4.3

Click on **Add a drive** and the program will show all the drives, that you can select and add, as you can see in the following picture:



figura 4.4

In this way, QuickVision DICOM® will work on many drives to store data on the drive that you want.



NOTA:

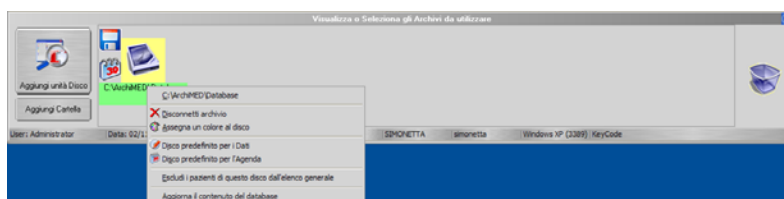
QuickVision DICOM® check if the added drive contains the database. If the drive does not contain the database, the program will ask you to create the workplace. In affirmative case a driven procedure will help you to create the database. In negative case, the disk won't be added.

Drives management: Add a folder

The procedure to add a folder is very similar to the one that we have just described. The program will connect to a folder instead of a drive. In this way, you can use many databases on the same drive.

Drives management: Disconnect a drive.

To disconnect a drive, you can follow two ways.



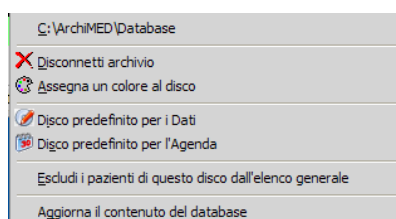
Pic. 4.5

- 1) Click with the right button of the mouse on the drive that you want to disconnect; the window of the picture 4.5 will open. Select **Disconnect database**.
- 2) Drag with the left button of the mouse the drive that you want to disconnect in the trash can on the right of the window (Pic. 4.5).

A drive no more available will be automatically disconnected (for example if you remove a pen drive accidentally). This is necessary to avoid program malfunction.

Drives management: Drive configuration.

Click with the right button of the mouse on a drive and the program will open the following window:



Pic. 4.6

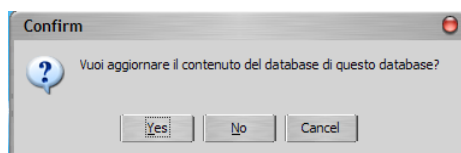
Assign a color to a drive: assign the color that you want to the selected drive.

This is the main database for the general: clicking on this option, a floppy disk icon will appear near the selected drive. The default drive is used for: price list of treatments, tabs and prints, cabinet data, access password and all the general data.

This is the main database for the diary: clicking on this option, a notebook icon will appear near the selected drive. In this way, your diary will be saved in this drive.

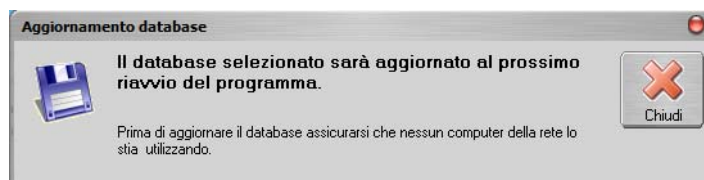
Exclude patients of this disc from the general list: the general list of patients will not show all of the patients of the selected disk.

Update the contents of the database: click on this button and you will see the following window:



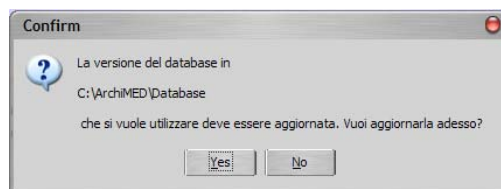
Pic. 4.7

If you answer "Yes" you will see the following window:



Pic. 4.8

At this point, you have to close and open again QuickVision DICOM®. The software will ask you to update the database through this message:



Pic. 4.9

Clicking on **Yes**, the program will help you to update the database.

Attention: if you click **No** the drive that you have to update can't be used until you will do this procedure.

Drives management: Automatic recognition of a disk.

We have introduced a new feature that makes disk management even easier: the self-recognition of a new disk connected to your personal computer.

When you connect the disk to the computer (such as a pen drive or a network drive) QUIVISION DICOM will recognize it automatically and will ask you if you want to use it as a database disk, in addition to those already active.

If you have connected a new disc, QUIVISION DICOM will prepare the disk in order to make it usable. To enable this feature, normally active, you have to open the "Setup program".

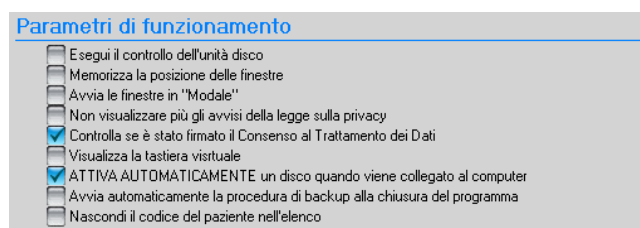


Click on the button Utilities (Pic. 4.10), then on



Pic. 4.10

In setup window, you have to activate the following feature (just if it is not already active) (Pic. 4.11):



Pic. 4.11

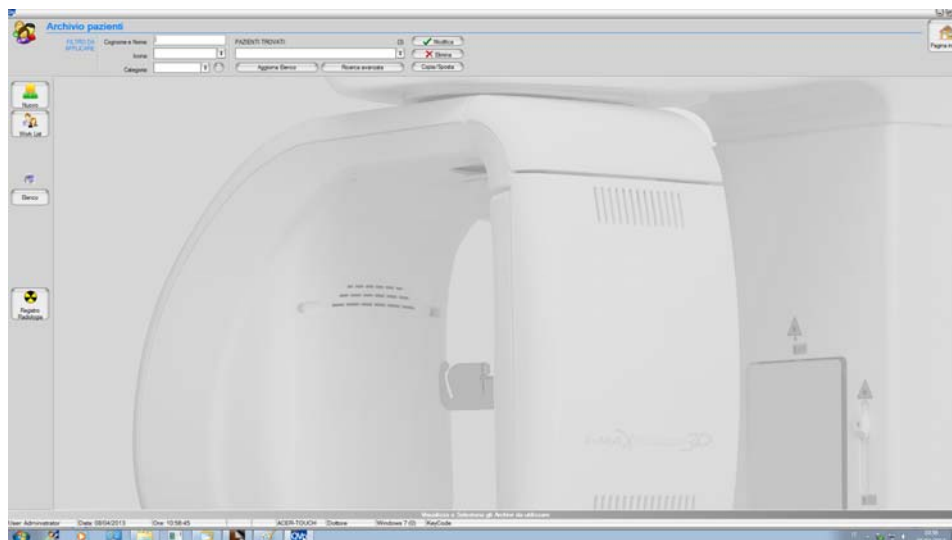
After that, QuickVision DICOM will cyclically check if a new drive has been connected.

5. PATIENTS' MANAGEMENT

Patients' management



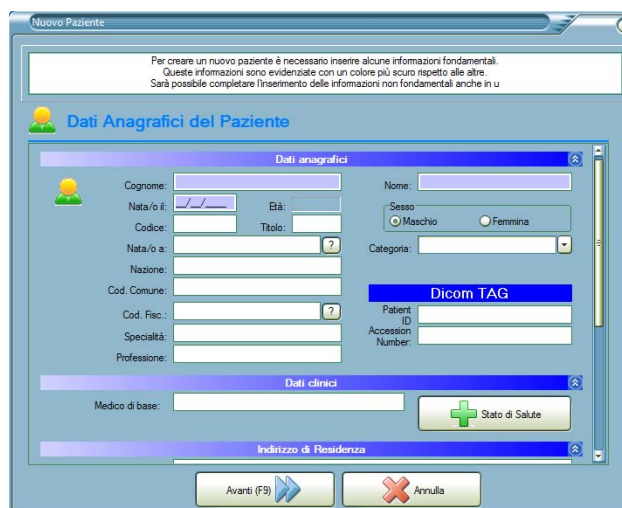
Click on  in the main page of the program and the following window will open:



Pic. 5.1

Patients' management: create a new patient.

To create a new patient, click on **New** (Pic. 5.1) and you will see the following window:



Pic. 5.2

To create a new patient, you have to enter some key information. Those information are stressed with a darker color (**Name, surname e birthdate**). You could enter the other information in a second moment.

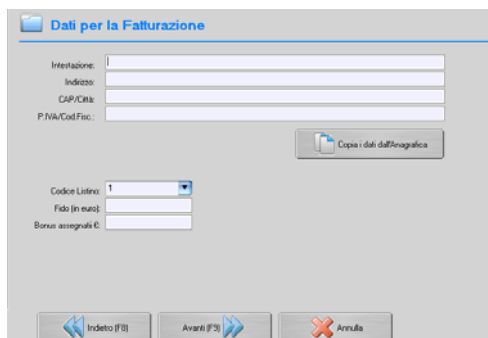
Before the registration of a new patient, you have to choose the drive to store it (only if you have more than one drive). Click with the left button of the mouse on the drive that you want to choose and an arrow will appear next to the drive image.

Click now on **Save**, that will appear in the bottom of the window when you have insert the fundamental information. Those information are stressed with a darker color.

Patients' management: Fill in all the patient's data.

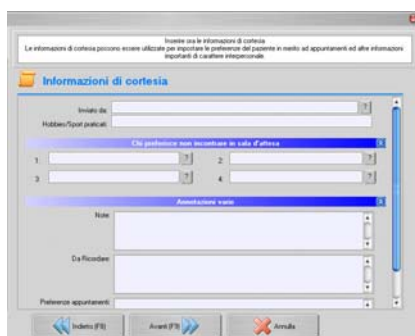
In the window of the picture 5.2, you can fill in all of the patient's information. When you enter the fundamental information, you can click on **Save** to store the new patient. The other information are optional: to insert them, there are many fields that you can fill by clicking **Forward**. Now show you the windows that will open when you click forward in the picture number 5.2.

The window of the picture 5.3 contains all the data used to compile the bills.



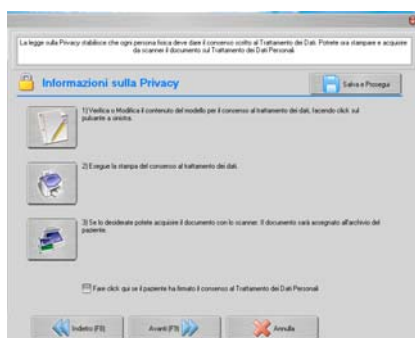
Pic. 5.3

The window of the picture 5.3 contains all the courtesy information that you want to annotate about the selected patient.



Pic. 5.4

The window of the picture 5.5 show information about privacy policy.



Pic. 5.5



If you click on this button, you can check or modify the model for the agreement to the treatment of data.

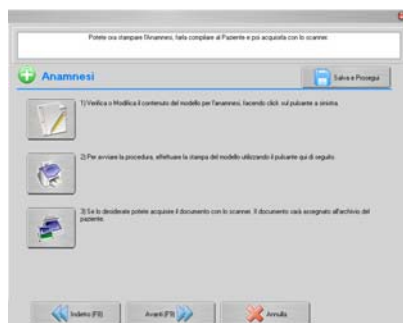


With this function, you can print the model for the agreement to the treatment of data.



If you click on this button, you can scan the document to store it in the patient's database.

The window of the picture 5.6 contains anamnesis' information.



Pic. 5.6



If you click on this button, you can check or modify the anamnesis' form.



With this function, you can print the form.



Clicking on this button you can scan the document to store it in the patient's database.

The window of the picture 5.7 show how to take a picture of the selected patient.

Clicking on the correspondent button, you can take a picture from **Camera, Scanner, Video camera, Disk.**



Pic. 5.7

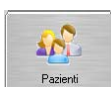
The window of the picture 5.7 show how to print the patient's badge.

Clicking on **Print patient's badge** you can print a pass for the patient with his personal codes. This card has a barcode to display quickly the information on computer's network. We advise you to print only with a special printer.



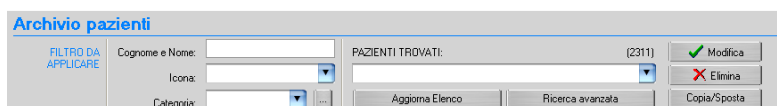
Pic. 5.8

Patients' management: Find a patient.



Click on **Pazienti** in the main page of the program to select the patient that you want to find.

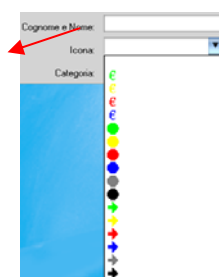
The following window will open:



Pic. 5.9

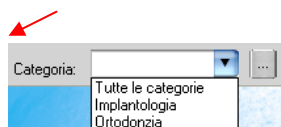
You can find one or more patient in three different ways:

- 1) You can write in the right field, name and surname (if you write only the first letter of name or surname, the program will automatically find all the patients with name or surname that starts with that letter.)
- 2) Through the icon: if you click on the button of the picture number 5.9 (red arrow), you will visualize a menu with a list of icons, so you can choose the one correspondent to the patient that you want to find.



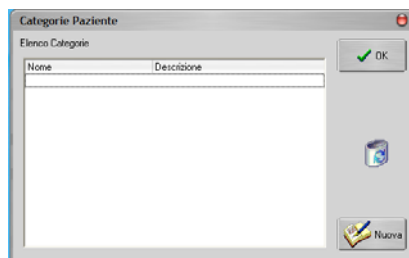
Pic. 5.10

- 3) Through the categories: you can differentiate patients into categories to find them quickly. If you click on the button of the picture 5.10 (red arrow) you can find the patient through the category that you want. The program will show you a list of the category's patients.



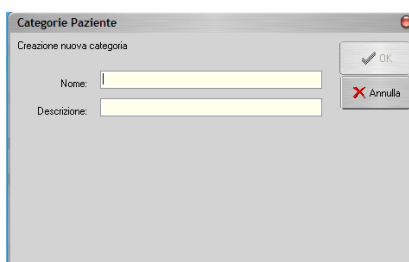
Pic. 5.11

To create a new category, you just have to click on the button on the right side of the categories' window and the following window will open:



Pic. 5.12

Click on **New** and fill in the fields of the following window:

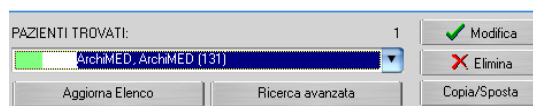


Pic. 5.13

Choose a **Name** and a **Description** and you will be able to create a new category.

Patients' management: Modify a patient.

To modify a patient, you have to go to the patient's page. Select the patient that you want to modify and click on **Modify** as the following window shows:

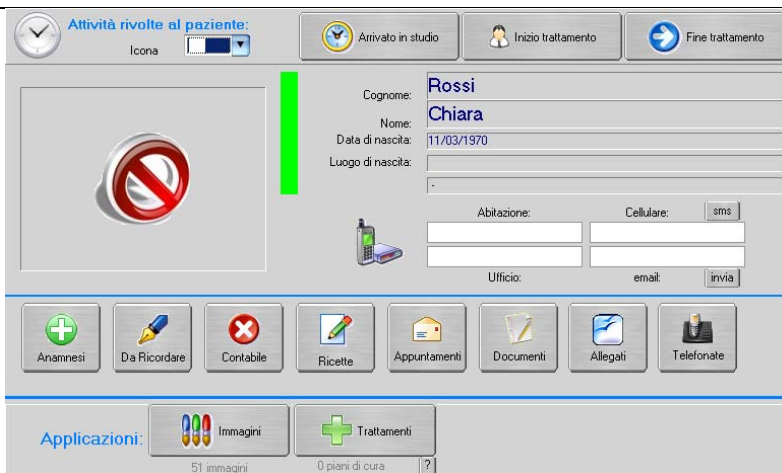


Pic. 5.14

A window with the patient's registry will open, so you can modify the patient's information.

Patient's management: Choose a patient.

You have to select a name from the list to open the form of that patient. You will see the following window:



Pic. 5.15

Patient's management: Came into the cabinet.

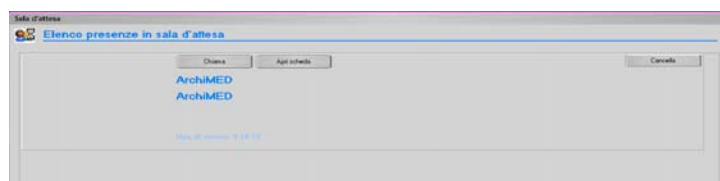
ONLY WITH MANAGEMENT MODULE. Click on this button when the patient come into the cabinet. In this way, the program inform all the network's computers that the patient is in the waiting room. Every computer will display the following window:



Pic. 5.16

If you want to see who is arrived, you just have to click on .

You will see the page of the waiting room.



Pic. 5.17

The button **Call** inform the secretary's computer that she can call the selected patient. That computer will display the following window:



Pic. 5.18

Admin in this case, represents the user who has sent the request.

The function **Open form** open the information of the selected patient.

The button **Cancel** delete the patient from the waiting room.

Patients' management: Starting the treatment.

ONLY WITH MANAGEMENT MODULE. The patient has come in the medical room.

Patients' management: Ending of the treatment.

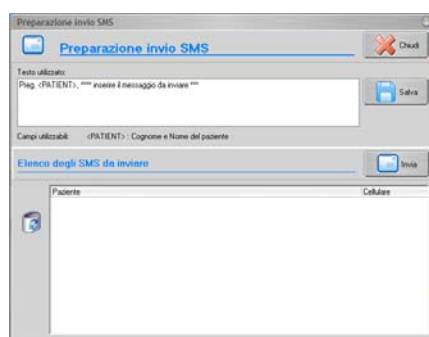
ONLY WITH MANAGEMENT MODULE. The patient has exit from the medical room.
These directions are for statistical purposes only.

Patients' management: Send a text message.

ONLY WITH MANAGEMENT MODULE.

Note: To send SMS, you must sign a contract not included in the purchase of the program.

If you want to send a SMS to the patient, click on . A window to write a message will open.



Pic. 5.19

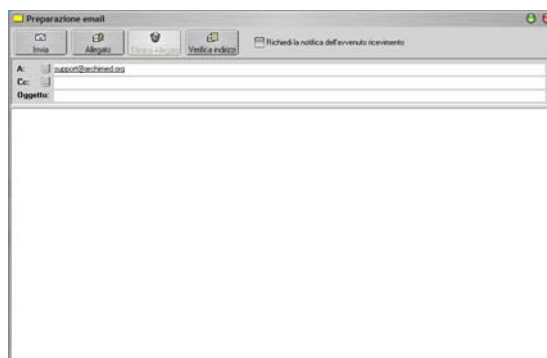
You can customize, as you want, the sender's name. You can choose a number or a text. The receiver will see what you have written as the sender of the message.

The receiver must be a valid phone number, written in the suggested way: 39 XXX YYYYYYY (the program delete blanks automatically, so you can insert them to visualize the number in a better way).

When you have finished writing the message, the program will ask you if you want to open SMS management. If you want to deepen this topic, please go to the specific chapter.

Patients' management: Send an email.

If you want to send an email to your patient, click on the button  near the email address. You will see the following window with the email address of the receiver. You have to insert the others information and any attachments file.



Pic. 5.20

To send an email, the computer uses your default mail handler. To send the email, open that program and click on "Send/Receive" (or something similar).



Patients' management: Images.

Open the window with all of the patient's images. For more information please read the specific manual.



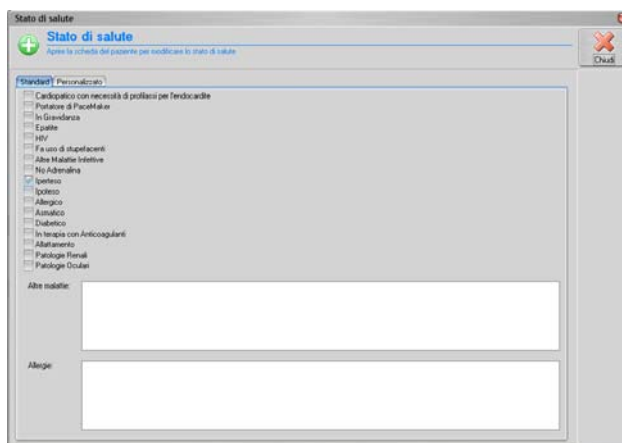
Patients' management: Treatements.

ONLY WITH MANAGEMENT MODULE. Open the window with all of the patient's treatments. For more information please read the specific manual.



Patients' management: Anamnesis.

Open the window with the patient's anamnesis. If the anamnesis has some important information about the patient's health, you will see a flashing red circle. This is necessary for privacy, because the program does not display reserved information.

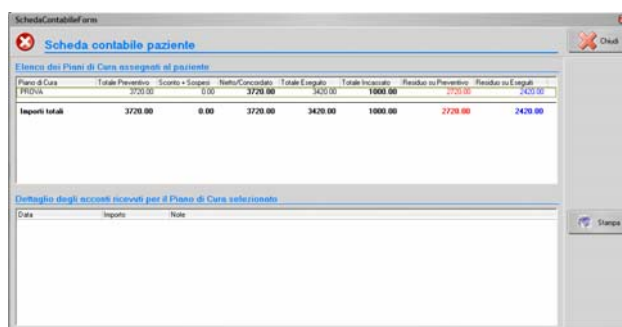


Pic. 5.21



Patients' management: Accountant.

ONLY WITH MANAGEMENT MODULE. Open accountant information of the patient and show the general account statement.



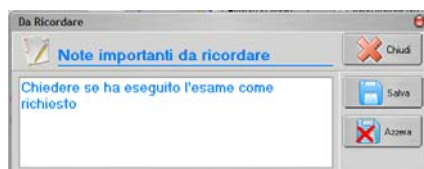
Pic. 5.22

On the top of the window, you can see all of the patient's treatments. Clicking on one of this, you will see the detail of advances received. You can print it to give a copy to the patient.

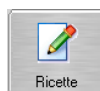


Patients' management: Remember.

With this function, you can write something you have to remember during the next visit. You can write all that you want. For example, you can write to ask the patient if he remembered to follow the antibiotic therapy or something else.



Pic. 5.23



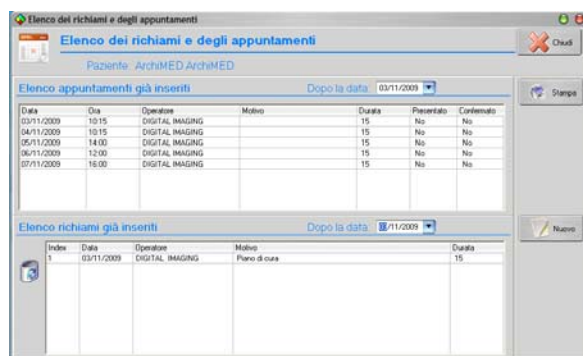
Patients' management: Prescription.

ONLY WITH MANAGEMENT MODULE. With this function, you can automatically write a prescription for one or more drugs or for a justification. This function may be not active in the program that you have.



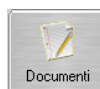
Patients' management: Appointment.

ONLY WITH MANAGEMENT MODULE. This function show the entire next patient's appointment. You can write one or more recall also.



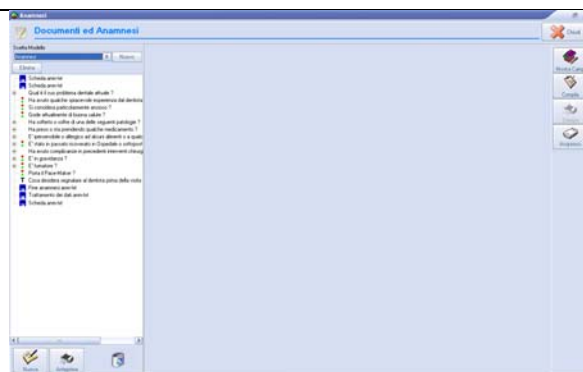
Pic. 5.24

You can also print an appointments memo for the patient.



Patients' management: Documents.

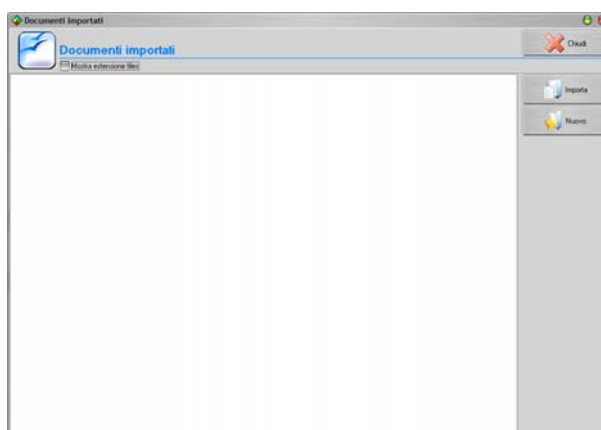
ONLY WITH MANAGEMENT MODULE. Open the management of patient's documents. You can create, print or take every kind of paper document.



Pic. 5.25

**Patients' management: Attachments.**

ONLY WITH MANAGEMENT MODULE. Show patient's attachments.

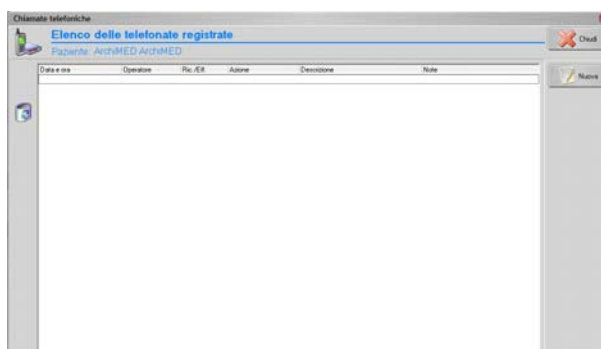


Pic. 5.26

You can import documents that the patient takes to the cabinet or you can insert new useful documents for management and patient's therapy.

**Patients' management: Phone calls.**

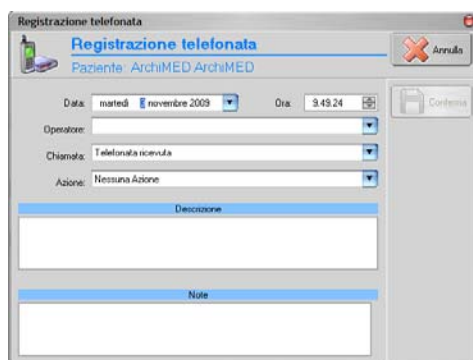
ONLY WITH MANAGEMENT MODULE. Show contacts between the cabinet and the patient.



Pic. 5.27

In this picture (5.27) you can see the list of the communications with the patient.

To add one more, click on **"New"**.



Pic. 5.28

Write all that you want, so click on "Confirm". In this way, you can manage in the right way the communications with the patient.

You can track conversations done, fax, email etc. In the same way, you can write a memo of something you have to do.



Patients' management: Worklist

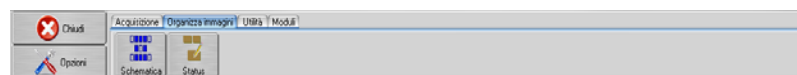
ONLY WITH DICOM COMMUNICATION MODULE. The software connects to the clinical RIS, to recover the patients' list that must be visited. To set up RIS, please read setup program in the Dicom section.

6. IMAGES' MANAGEMENT

Images' management



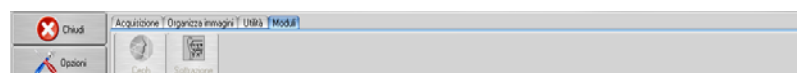
Pic. 6.1



Pic. 6.2



Pic. 6.3

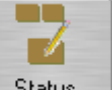
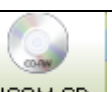


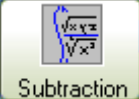
Pic. 6.4

IMAGES: images' taskbar.

The images' taskbar has four pages. There are the following functions.

IMAGES: How to take images	
	This function takes images through the number one intraoral system.
	This function takes images through the number two intraoral system.
	This function takes images through the video camera.
	This function takes images through the panoramic system.
	This function takes images through the TC / CBCT system.
	This function takes images through the scanner, using TWAIN interface.

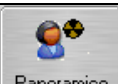
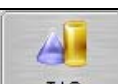
 Fotocamera	This function takes images through the camera in the relative folder.
 3D	You can find this function only in the version without the 3D module. With this function, you can check the operation of 3D application, with some sample images.
IMAGES: Organize images	
 Schematica	Organize images into a scheme to save images and display them all together. There is a page for every patient with most 20 pictures in every box.
 Status	Organize images to save them and display them all together. The user can organize this layout as he wants. There are 10 pages for every patient.
IMAGES: Utilities	
 Importa	This function consents to import images.
 Importa TAC	This function consents to import TC or CBCT exams. It is available only with 3D module.
 Schermo	Display a white screen.
 DICOM CD	Create a dicom cd according to the creation standard of a dicom cd.
 Crea CD	Create an images' CD with a viewer.
 Verify Monitor Quality	With this function, you can verify monitor quality. We suggest you to use this function immediately after the installation, and then every three months, or if you change the monitor.

IMAGES: Applications	
	This option starts an external application to the cephalometric calculations procedure.
	This option starts an external application to the images subtraction procedure.

Images options.

Click on  to open the configuration window.

Configuration procedure has the following options.

	In this page, you can find all the options of images' module.
	This function selects RVG intraoral system number "1" and number "2". You have to request intraoral system's parameters to the equipment supplier. The application supports at the same time 2 different systems RVG.
	This function selects panoramic systems. You have to request panoramic system's parameters to the equipment supplier.
	This function selects TC o CBCT system. You have to request TC or CBCT system's parameters to the equipment supplier.
	This function consents to select scanner's options. Parameters are not necessary. This option will be available hereafter.
	This function consents to select camera's options. Parameters are not necessary. This option will be available hereafter.
	This function consents to select intraoral video camera's options.
	This function consents to select 3D module's parameters.

	This function consents to select implant external application's parameters.
	This function consents to select cephalometric external application's parameters.



Images options: Options.

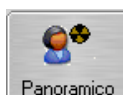
This function contains images' module options.



Images options: Intraoral.

You can select the intraoral RVG system that you want to use. You can select two RVG systems. Intraoral systems has the numbers one and two.

You can select it from the list.



Images options: Panoramic.

Select panoramic / cephalometric system.

You can select it from the list.

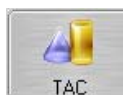


Image Options: TC or CBCT.

Select TC / CBCT system.

You can select it from the list.



Image Options: Scanner.

Select scanner options. It is supported by TWAIN drivers.



Image Options: Video camera.

Select video camera options. It is supported by TWAIN drivers; files transfer or direct acquisition from video camera use VFW (Video for Windows) technology.



Image Options: 3D options.

Select options for 3D module.

Rendering engine.

Ray Cast (CPU): uses the CPU to process the 3D reconstruction. This option need a powerful CPU and a powerful graphic board.

3d Texture (GPU): uses the GPU (Graphic Process Unit) to process the 3D reconstruction. This option need a very powerful graphic board.

Ray Cast (Best) 3D Texture (Preview): uses the CPU to process the 3D reconstruction for the best result when any 3D movements are finished. Uses the GPU for any 3D volume movements.

Shading.

Set the shading value for the 3D volume. This option needs a lot of memory to work. Please enable it only if you have at least 2 GB of RAM.

Cross Section.

Width: set the size of the cross image. The size is in millimetres.

Pano Section.

Numbers: set the number of the panoramic sections to create.

Surface reconstruction.

These parameters set the option to create the surface reconstruction.



Image Options: Implants.

You can choose parameters for Implant external application.



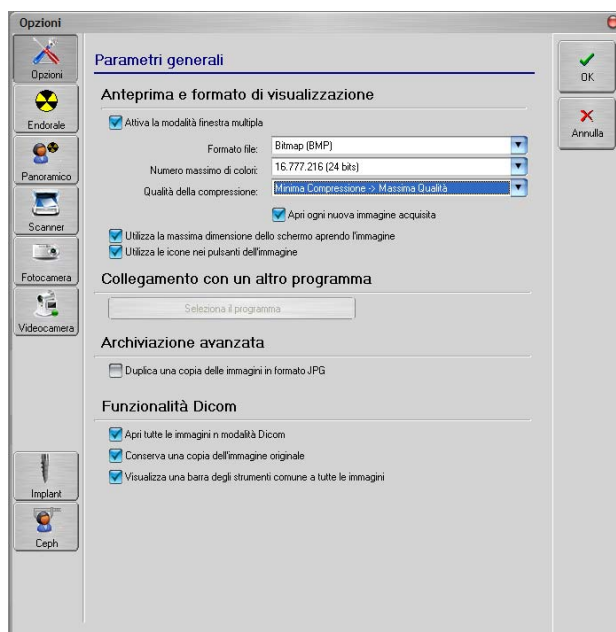
Image Options: Ceph.

You can choose parameters for Cephalometric external application.

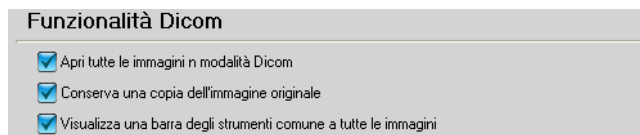
Dicom images

This function allows to show the images in DICOM format using a viewer that supports images up to 65535 gray levels.

To activate this function (by default is enabled) click on  in window 6.1, the following window will open:



Pic. 6.5



Pic. 6.6

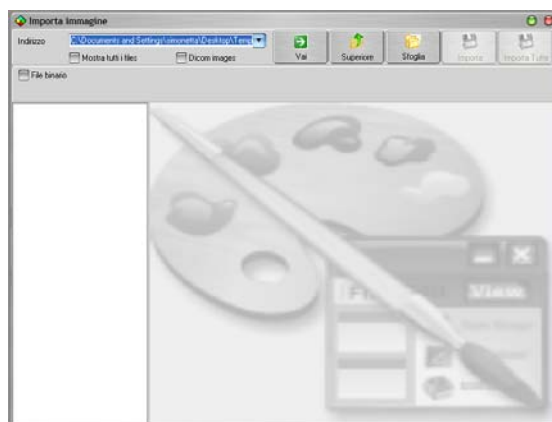
Check the option "Open all images in Dicom modality" to enable the Dicom viewer. If you want to save a copy of the original image (by default is yes) check this option. This option allows you to go back to the original image at any time. If you want a common toolbar check the requested option.

Then click on .

IMAGES: Import images



To import any supported images, click on **Importa**, and the following window will open:



Pic. 6.7

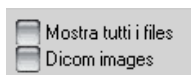
You can import the following kind of images:

- Standard graphic files: bitmap, jpeg, tiff, png, gif, etc.
- Dicom file with one image.
- 16 bits grayscale RAW file, with known spatial dimensions.

If you try to import an image with unknown extension, the program will show you a message of error.

Description.

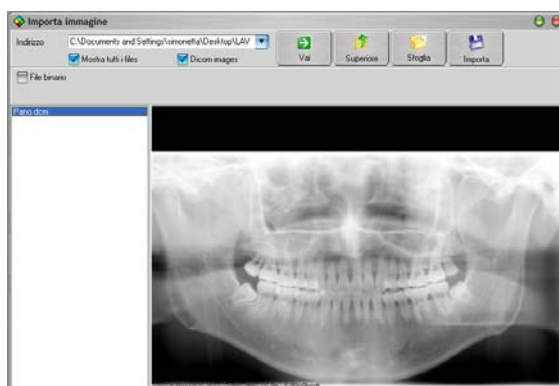
If you want to show all file in the selected folder, check the box "Show all files". In this way, you can see all the files, without any filter on the extension. To show the dicom files only, check the box "Dicom images". In this way, you can see only dicom files.



Pic. 6.8



Click on **Sfoglia** and select the source folder from which you want to import the image. If QuickVision DICOM® can open the image, it will show it in the preview area, as in the following example.



Pic. 6.9



Click on **Importa** and the program will insert the image in the database of the patient's images.

To import all images of a folder, click on “Import all”. You can use this function for graphic standard images only. This function is not available for Dicom and RAW images.

To import a RAW images, you have to know the file header and the orientation of the image. You can import only 16 bits grayscale RAW images.

Double clicking with the left button of the mouse on the imported image and the following window will open:

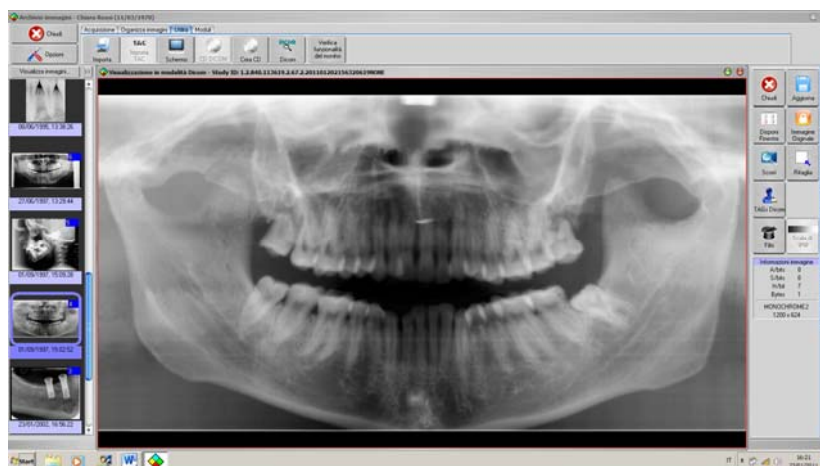
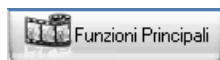


Figura 6.10

In Dicom viewer:

- Holding pressed the left button of the mouse on the image, it's possible to move the image inside the window.
- Moving the small wheel of the mouse is possible to zoom the image.
- Holding pressed the right button of the mouse and moving to the left or to the right the mouse is possible to clear up or to darken the image.
- Holding pressed CTRL from the keyboard and the left button of the mouse, and moving the mouse on the image, it is possible to display the position of the pixels in the image and its gray values.
- Holding pressed CTRL from the keyboard and the right button of the mouse, you can use Windows Level's function in the ROI.
- Holding pressed MAIUSC (near the CTRL) from the keyboard and the left button of the mouse, you can zoom in lens effect.

IMAGES: Meaning of the buttons



Main Functions

It belongs to this menu the following functions:



Pic. 6.11

Arrange windows: this function allows to open more images and to place side by side so that contemporarily visualize.

Original image: this function restores the image where the filters have been applied to the original state.

Pan Image: this function allows moving the image inside the window.

Cut image: this function allows visualizing only the part interesting of the image. Pressing this button it will open the following window.



Pic. 6.12

Positioning in one of the angles of the rectangle, and holding pressed the left button of the mouse, it is possible to modify the size of the rectangle; holding pressed the left button of the mouse inside the rectangle it is possible to move the rectangle in the point of the image that interest. Press therefore the



button and you will visualize the clipping selected of the image enlarged.

Dicom TAGs: pressing this button it will appear all the information related to the image as Dicom tags.

Toolbar: display a toolbar that you can move, with the main functions that you can use on the image.

Filters: this function consents to insert, besides the existing ones, customized filters. Clicking on this button, the following window will open:



Pic. 6.13

To come back to the previous elaboration of the image, click on



ADVERTENCE:

Filters can modify images and compromise the diagnosis. For this reason, you have to do the diagnosis only on the original image.

Tissues: this feature allows you to highlight tissues by applying a sharpen filter, slight or more pronounced.

Media: this feature reduces the picture noise by applying the correction of the mean. The levels present apply the filter with greater or lesser intensity.

Sharpen: this feature enhances the edges of the image, particularly the bone trabeculae. There are three predefined levels. It is possible to set the value, customizing it with the scroll bar and pressing "Apply".

Emboss: this function creates the image in low relief. To see the effect of the filter continuously, check the "continuous variation" and then move the scroll bar.

Sticky: this function creates the image highlighting the contours markedly. To see the effect of the filter continuously, check the "continuous variation" and then move the scroll bar.

Custom: this feature allows you to create custom filters. It is possible to create up to 8 custom filters. To create a custom filter or edit an existing one, press the right mouse button you want to customize. QUIVISION DICOM displays a window to set the filter.



Pic. 6.14



ADVERTENCE:

The personalization of the filters can give results that improve or worsen the quality of the image. QuickVision Dicom cannot perform any control on the quality of the result. It is responsibility of the user to create customized filters that help to improve the quality of the image.

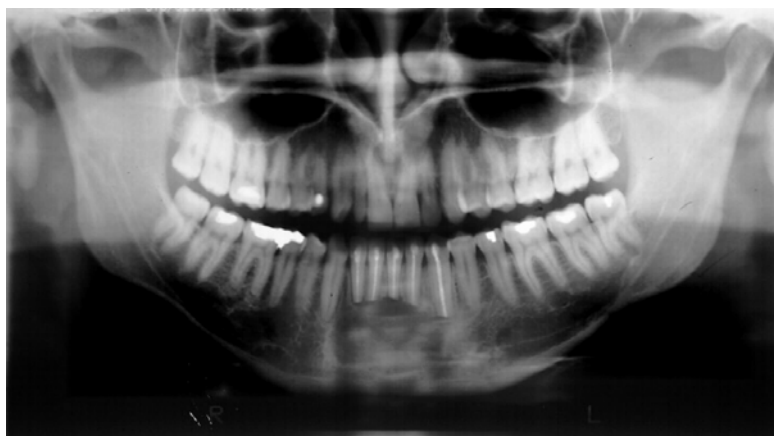
The field "Name displayed" is the name that you will see on the customized button. It is possible to create up to eight custom filters. Select the filter that you want from the list. The filter "None" means that you will not apply any filters.

In the bottom of the window, you can see a gamma correction value.

When you have finished to customize the filter, click on "Save". The new filter is now available.

Areas filter.

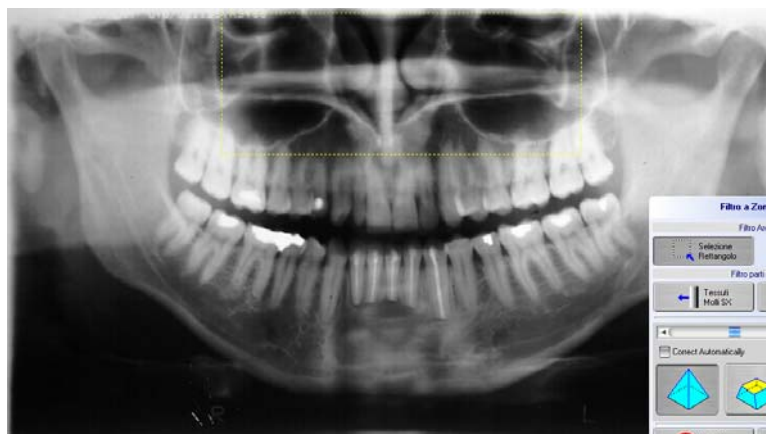
Areas filter consents to correct contrast and brightness of a part of the image. It corrects gradually to avoid tile effect on the area.



Pic. 6.14.1

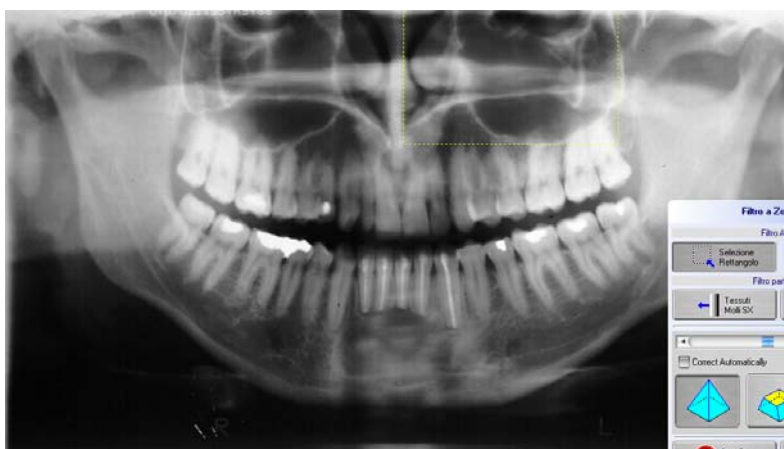
In the example above, we have a good image in the bony part of the mandible and maxilla, but the part of the breasts is completely "smashed" by the x-rays. With the areas filter, we can try to correct this defect. Clearly, the correction can only be successful if there is information to be processed. If the area to be corrected is completely "burned out", you can't do any correction. The correction will give better results with images dicom at least 12 bits (4096 gray levels).

Select now the area that you want to correct.



Pic. 6.14.2

We apply the filter moving the cursor to the right of correction (lighten; darken on the left). To confirm the correction, click on **"Apply"**.



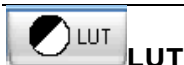
Pic. 6.14.3

To better refine the correction, you can select a smaller area and repeat the process until you reach the desired result.



Pic. 6.14.4

In the picture above, you can see the result. If you compare the image in Fig. 6.14.1 with that in Fig. 6.14.4, you can appreciate the differences.



ADVICE:

The editing of contrast and brightness can introduce artificials that can compromise the diagnosis. For this reason the diagnosis must exclusively have effected on the original image.

Pressing this button it will open the following menu of functions



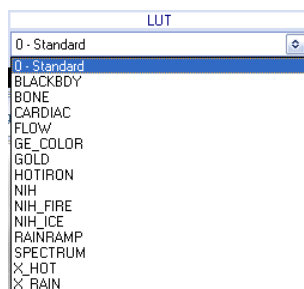
Pic. 6.15

Invert: it allows to reverse the image from positive to negative and vice versa.

W/Level ROI: this function allows to select, with the left button of the mouse, a region of the image that interest to underline, and to modify the levels of ROI to improve the quality of the image of the selected region.

Gamma Value: with this function, it is possible to modify the value of the Gamma of the image.

LUT: clicking on  the following menu will open, to choose the LUT that you want:



Pic. 6.16

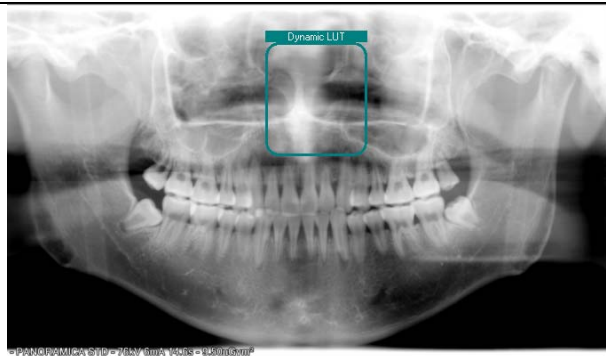


This button consents to optimize image:

- In the central part;
- The entire image;
- In the top;
- In the bottom;



Clicking on this button, the following window will open:



Pic. 6.17

Moving the window "Dynamic LUT", you will optimize the content of the image inside the box. The outer part of the image may be worse in quality. To move the frame, bring the mouse inside and holding the left button to move in the desired area.



Measures

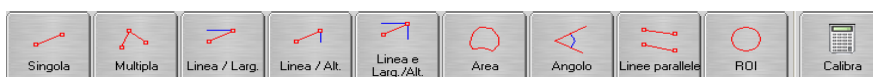


ADVICE:

The radiographies are a bidimensional representation of three-dimensional object places in the space; therefore their representation can be deformed in function of various factors, what enlargement, relative position of the object in comparison to the receptor of image, etc. These factors do not allow therefore a precision quantifiable of the trial.

QuickVision DICOM® is not a tool of measure because, also after the procedure of calibration of the measure in comparison to a known repere, the accuracy of the same measure cannot be guaranteed, that therefore it has to be considered as indicative.

Pressing this button, it will open the following menu of functions:



Pic. 6.18

You can reduce or move all the measures in the images using the mouse.

Single: this function allows to take single measures to the image.

Proceed in the following way:

- put the cursor of the mouse in the point from which you want to start the measurement and press the left key of the mouse;
- put the cursor of the mouse in the point of arrival of the measure and press the left key of the mouse; it will appear the effected measure.

To cancel an effected measurement is necessary to make click with the left button of the mouse on the measurement to cancel and press the key Canc" of the keyboard.

Multi: this function allows to effect multiple measures to the image.

Proceed in the following way:

- put the cursor of the mouse on the point from which you want to start the measurement and press the left key of the mouse;
- put the cursor mouse on the second point to measure and press the left button of the mouse;
- make the same operation for the third point and so on.

To finish the measurements press the right button of the mouse.

Line / Width.: this function allows to effect the measure of the width of a part of the image.

Proceed in the following way:

- put the cursor of the mouse on the point from which you want to start the measurement of the width and press the left key of the mouse;
- put the cursor of the mouse on the point of arrival of the measure and press the left button of the mouse.

To cancel an effected measurement is necessary to make click with the left button of the mouse on the measurement to cancel and press the key "Canc." of the keyboard.

Line and Width / Height: this function allows to effect the measure of the width and the height of a part of the image.

Proceed in the following way:

- put the cursor of the mouse on the point from which you want to start the measurement and press the left key of the mouse;
- put the cursor of the mouse on the point of arrival of the measure and press the left button of the mouse.

To cancel an effected measurement is necessary to make click with the left button of the mouse on the measurement to cancel and press the key "Canc." of the keyboard.

Area: this function allows to calculate a determined area of the image.

Proceed in the following way:

- put the cursor of the mouse on the point from which you want to start the measurement and press the left key of the mouse;
- put the cursor of the mouse on the second point of the measure and press the left button of the mouse;
- put the cursor of the mouse on the point of arrival of the measure and press the right button of the mouse. The calculation of the selected area will be visualized.

To cancel an effected measurement is necessary to make click with the left button of the mouse on the measurement to cancel and press the key "Canc." of the keyboard.

Angle: this function allows to calculate the angle of a part of the image.

Proceed in the following way:

- put the cursor of the mouse on the point from which you want to start the measurement and press the left key of the mouse;
- put the cursor of the mouse on the point of arrival of the measure and press the left button of the mouse.

To cancel an effected measurement is necessary to make click with the left button of the mouse on the measurement to cancel and press the key "Canc." of the keyboard.

Parallel lines: this function allows to calculate the distance among two parallel lines.

Proceed in the following way:

- put the cursor of the mouse in the point from which you want to start the measurement and press the left key of the mouse;
- put the cursor of the mouse in the point of arrival of the measure and press the left button of the mouse.
- proceed in the same way to draw the parallel straight line.

To cancel an effected measurement is necessary to make click with the left button of the mouse on the measurement to cancel and press the key "Canc." of the keyboard.

ROI: this function allows to calculate gray level value into a ROI.

You have to proceed in the following way:

- Put the arrow of the mouse in the point of the image where tou want to calculate the ROI, then click with the left button.
- Resize the ROI as you want.

The program will show you the values.

To delete a measure, you have to click with the left button of the mouse on the measure you want to delete, then press "Canc." From the keyboard.

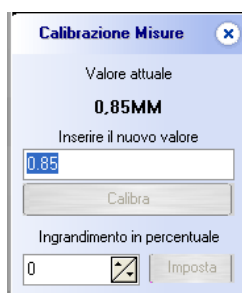
Calibrate: This function consents to calibrate an image.

You have to proceed in the following way:

- Write a correct measure. You have to measure an object with a known dimension.



- press **Calibra** and the following window will open:



Pic. 6.19

Insert the correct value or the image enlargement as a percentage, then press Calibrate.



Implants



ADVERTENCE:

The implant simulation doesn't owe a diagnostic tool but only a tool of visual evaluation

With this function you can simulate an insertion of an implant to a patient.

Pressing this button will open the following menu of functions:



Pic. 6.20



Pressing the button  an implant will be added for the inferior arcade as shown by the following figure:



Pic. 6.21

To move the implant in the correct position it is necessary to press the left button of the mouse and, holding pressed the button, move the implant in the correct position.

To modify the inclination of the implant it is necessary to position the cursor of the mouse in the low part of the implant, when it becomes an arrow, press the left button of the mouse and change the inclination of the implant.

Pressing the right button of the mouse on the implant the following window will appear:



Pic. 6.22

Selecting "Implant/Object properties" it will open the following picture:



Pic. 6.23

You can change both the diameter and the height of the image; to view the modifies that you've done, click on "**Update**".



ADVERTENCE:

The measures of the implant are to consider **as indicative, not being possible to guarantee its accuracy.**



Clicking on  the software will add a new implant for the maxillary arch, as the following picture show:



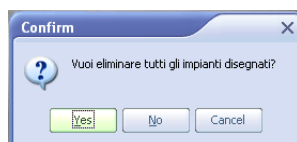
Pic. 6.24



Clicking on  you can add a graphic file from a disk to the image. You have to select the file from a window.

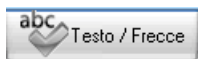


Clicking on  you can delete all the implants inserted. To confirm this functions, the following window will appear:



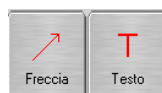
Pic. 6.25

If you answer "Yes", the program will delete all the implants and the drawings on the image.



Text / Arrows

Pressing this button it will open the following menu of functions

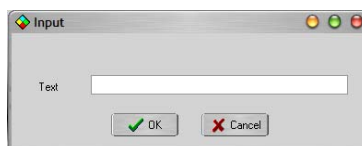


Pic. 6.26

Arrow: this function allows to insert on the image arrows inserting besides a text that will appear next to the arrow.

Proceed in the following way:

- put the cursor of the mouse on the point of the image from which you want to depart the arrow;
- put the cursor of the mouse on the point of the image to which you want that the arrow arrives, the following window will appear:



Pic. 6.27

insert the text you want to visualize near the arrow and press .

To cancel an arrow with the text, you have to click with the left button of the mouse on the arrow and press the key "Canc." of the keyboard.

Text: this function allows to insert some text on the image.

Proceed in the following way:

- Put the cursor of the mouse on the point of the image where you want to insert the text and press the left button of the mouse;
- You can modify the dimension of the rectangle; after you have chosen the dimension, press the left button of the mouse, it will open a window in which you can insert the text you want to visualize on the image. Then press .

To cancel the insertion of the text, you have to click with the left button of the mouse on the text and press the key "Canc." of the keyboard.



ZOOM

ADVICE:



You never have to consider the dimension of the image represented to video as an exact report in comparison to the real dimension of the image. It is not possible to measure the image with rulers or other tools supported to the monitor.

Selecting this button will open the following menu of functions:



Pic. 6.28

Zoom Area: this function allows to enlarge only the part of the image you have selected.

Proceed in the following way:

- select the area to enlarge holding pressed the left button of the mouse;
- release the button of the mouse and the area of the selected image will be enlarged.

Lens: this function allows, holding pressed the left key of the mouse on the image, to enlarge the parts of the image touched by the cursor of the mouse.

Fit to page: this function allows to fit the image to the page to visualize completely the image.

Fit Vert.: this function allows to vertically fit the image to the page.

Fit Hor.: this function allows to horizontally fit the image to the page.

Total: this function allows to totally enlarge the image.

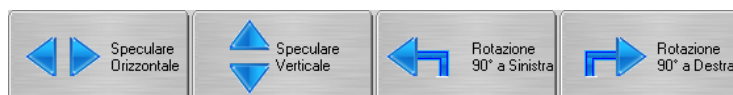
150 %: this function allows to enlarge the image at 150%.

To return to the normal visualization press the button "Fit to page."



Orientation

Selecting this button will open the following menu of functions:



Pic. 6.29

Mirror horizontal: this function allows to effect the speculate horizontal of the image.

Mirror vertical: this function allows to effect the speculate vertical of the image.

Rotation 90° to the left: this function allows to rotate to the left the image of 90°.

Rotation 90° to the right: this function allows to rotate to the right the image of 90°.



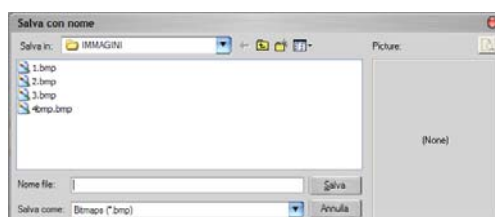
Utilities

Selecting this button will open the following menu of functions:



Pic. 6.30

Export: this function allows to export the image. It will open the following window:



Pic. 6.31

Insert the name of the file and press **"Save"**, the image will be saved. You can export an image in dicom format.

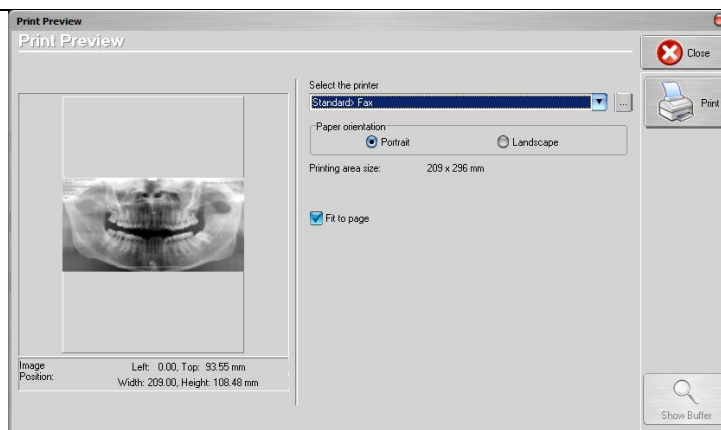
Medical Report: this function allows to insert notes to the image as you can see in the following image:



Pic. 6.32

Select the category of the image, insert the annotations and press .

Print: this function allows to print the visualized image. It will open a window of preview of print in which it can be select the printer and the picture size.



Pic. 6.32.1

On the left side of the window (Pic. 6.32.1), you can see the print preview. The preview is related to the dimension of the selected print paper. The indication "Fit to page" set the dimension of the image to stay on the print area. If you uncheck this option, you can print the image in real size, which is the real size of the picture, that maybe it is not correspondent to the real dimension of the object.

The option "Portrait" set the orientation of the paper as vertical. The option "Landscape" set the orientation of the paper as horizontal.

The button "Show Buffer" show the content of dicom buffer of the images that are going to be printed. Select the printer from the printers' list, set options so press the button "Print". To use Dicom printers, you must have the optional module "Dicom communication". You have to insert settings of the printer in the setup of the main part of QuickVision DICOM.

Send to CD: this function allows to send the image to the CD. The image is added at the other sent before. When the application burn the CD, it include a Viewer.

Send to email: pressing this button, the following window will open:



Pic. 6.33

You can send three different kind of images: bitmap, jpeg and dicom. To send an email with images, you have to consider the final dimension: dicom format is the bigger one (up to 20 MB); bitmap format is smaller than the dicom one, but it is not small at all (up to 10 MB). JPEG format requires almost 2 MB if it is not compressed and almost 500 KB if it is compressed.



Insert all necessary data and click on . The window to write the email will open, to insert receiver, object and text of the message.

To send the email, open your email program and select "Send/Receive" or something similar.



NOTA:

QuickVision DICOM® doesn't send away directly the images via email but it prepares them so that can be sent through your default e-mail program. The settings out of the account of e-mail and all the safety settings out must be verify in your e-mail program.

Send to PACS: this function allows to send the image to the PACS Serve (only with Dicom communication module). You have to set all the PACS options in the setup of the main module of QuickVision DICOM®.

IMAGES DATABASE

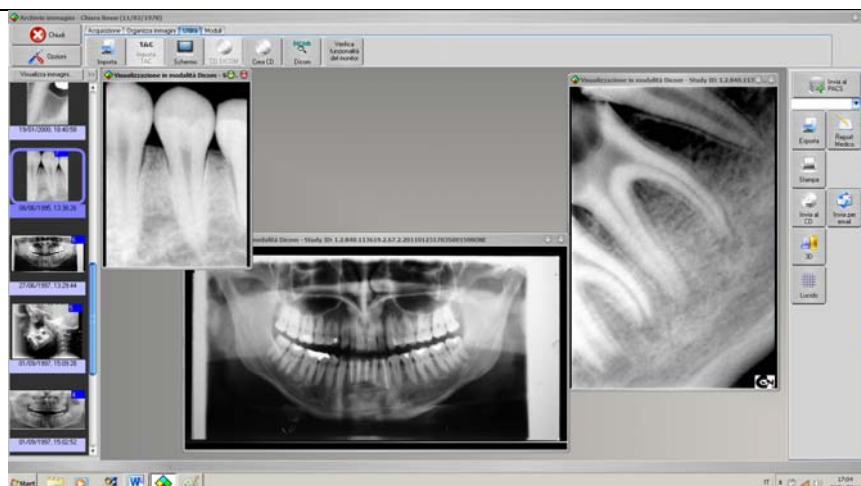
There are three different possibility to store the images:

1. Batch file
2. Schematic
3. Status

1. IMAGES: Batch file

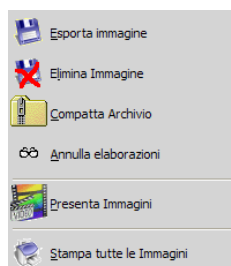
	The batch file is the representation of the patient's associated images, not organized in a specify mode. The only organization is the sequence, without dental association. The visualization is possible using the lateral scroll bar. The ordination is by insertion date: the most recent will be the first of the list. Every time you select a patient, you can see the preview of all the images. This operation should be slow if the images file is too big, so you can organize the visualization in program setup. To elaborate the images of the batch file you have to double click on the image preview. In this way, the image will be zoomed in the elaboration window for a better visualization. The program allows the contemporary zoom of more images.
---	--

The program consents to show and zoom many images at the same moment. The program displays them all together in the elaboration window, as you can see in the following picture.



Pic. 6.34

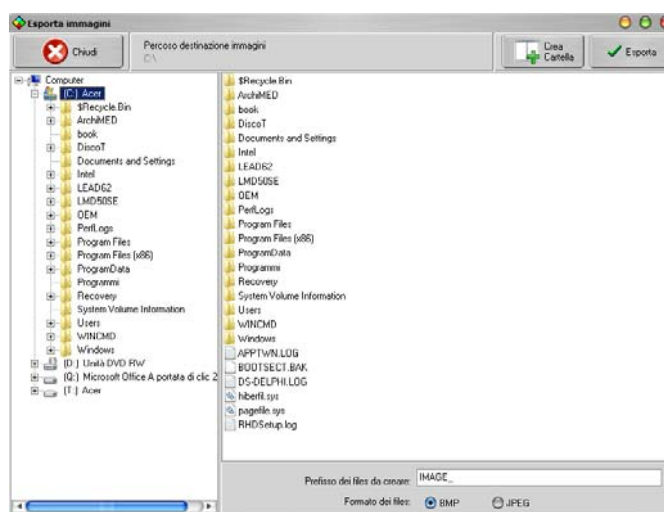
Clicking with the right button of the mouse on an image preview (picture 6.34), the following menu will appear:



Pic. 6.35

Export image

It saves the selected preview image on a disk, with his real dimension and not with the preview one. In this way, you can create exclusive graphic files. You cannot export Dicom images with this procedure. You can also export a group of images. To select more than one image, holding press the CTRL key of the keyboard and click on every image you want to save with the left button of the mouse. If you select more than one image, the following window will open:



Pic 6.35.1

Select the destination folder and the graphic format of the files (you can choose between BMP and JPG). Click on "Export" to confirm the operation. When the procedure is over, the destination folder will automatically open in a computer window.

Delete image



ADVERTENCE:

QuickVision DICOM® deletes the images in irreversible way. Before deleting images, the program will ask you a confirmation. If the delete is confirmed it will not be more possible to restore the deleted images only from a backup copy.

You can't recover a deleted image. You can also delete a group of images. To select more than one image, holding pressed the CTRL key of the keyboard and click on every image you want to delete with the left button of the mouse.

Compact database

Compact images database. This function automatically starts every time you delete an image. If there are any "hole" in the batch database (box without any image), we recommend you to start this procedure.

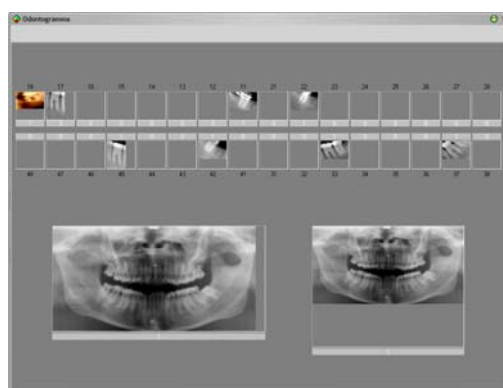
Slide show.

It starts a full screen slide show of all the images. This function is useful to create a collection of images of a specific treatment to the patient. It is possible to control the presentation using the keyboard or the screen button. To go back to the main menu, click on **Close**.

2. IMAGES: Schematic



Click on



Pic. 6.36

Here you can find a box for every tooth. Every box can contain 20 images. Under every box, you can see the number of images inserted in. To insert an image in a box, you have to drag it from the batch file

Clicking with the right button of the mouse on one of this box, you will see the following window:



Pic. 6.37

Nella parte inferiore della finestra sono presenti alcuni strumenti di correzione alla visualizzazione.



Counterclockwise rotation.

Clockwise rotation.

Flip vertical.

Mirror horizontal.

Negative/positive.

Delete the image.

The preview window still opened for a few second. To let the window opened, you have to click on the box, or clicking for a few second. To close a window click on another box or on any other part.



The showed image will become the first in the preview window.

In the upper part of the window, there is the navigation bar for images database.



Fast rewind of images.

Slow rewind of images.

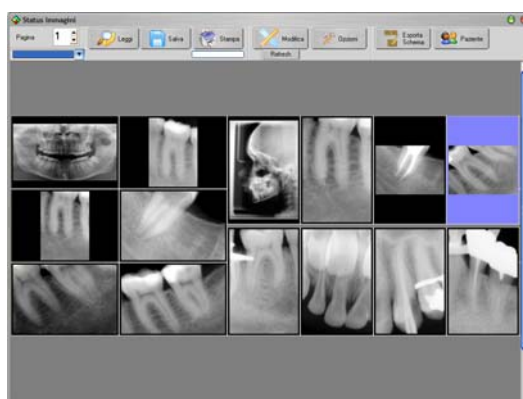
Slow forward of images.

Fast forward of images.

The number that you see in left bar indicate which is the image in box preview.

To elaborate the image is necessary a double click on the preview window.

3. IMAGES: Status



Pic. 6.38

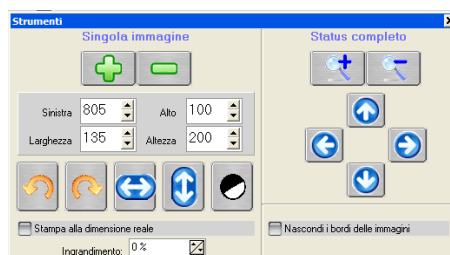
Status is a personal representation.

Disposal and dimension of images are free and you can change them in every moment.

You can use a model for every patient's page or customize the layout for every patient.
You have up to eleven page for every patient. In every page, you can insert up to 30 images.

To modify box disposal, click on 

After that, the following window will appear:



Pic. 6.39

Status: meaning of the functions

	Add new box		Enlarge all boxes
	Delete a box		Reduce all boxes
	Rotate the image 90 degree to the left		Move all boxes to the top
	Rotate the image 90 degree to the right		Move all boxes to the right
	Mirror horizontal		Move all boxes to the left
	Flip vertical		Move all boxes to the end
	Negative/positive		

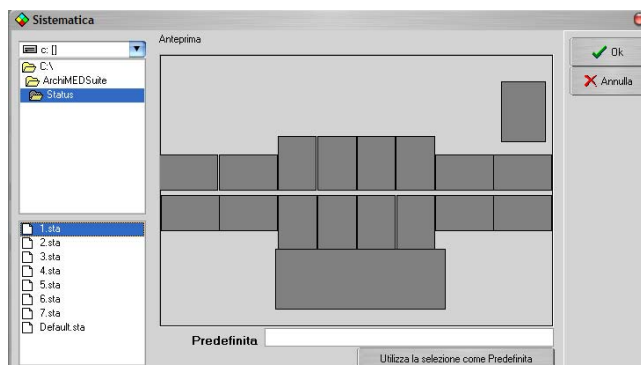
To move the box, simply drag it until the position you desire, clicking and holding with the left button on the mouse on it. You can use arrows on keyboard also.

To change the box dimension, simply click on low right corner with the left button of the mouse and drag until you reach the dimension you desire.

Status: Main menu.



Load: load the archive disposal from a file. Selecting this function, the following window will appear:



Pic. 6.40

In left list appears the drive configuration. To find a configuration on another drive, you have to select it in the lists above.

In the right part, there is a configuration preview.

If you want to use this configuration as default, you have to confirm it clicking on **Use selection as default**.

Clicking on **Ok**, the disposal will be copied in active window of status.

Save: save the disposal active on a file. The files name is free editable.

Print: print the active window. We suggest you the horizontal orientation of printer to obtain a better result.

Option: clicking on this button, the following window will open:



Pic. 6.41

Insert the correct data to print the Status.

Export: this function allow to print a Status.

Patient: clicking on this function, a window with all patient's data will appear.

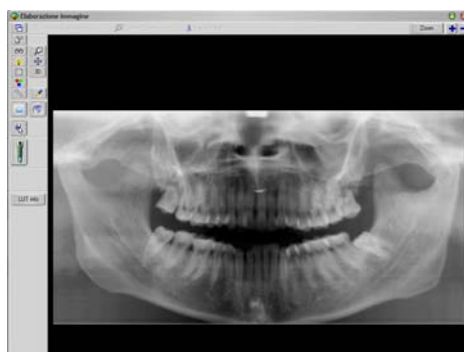
Elaboration of images with not Dicom view



ADVICE:

The application of filters to the images, the calibration of the measures, the change of contrast and brightness and all the functions that modify the images, can modify the image and compromise the diagnosis. For this reason, QuickVision DICOM® always preserves the original copy of the image to which you have to refer for the diagnosis.

Double click on the image you want to elaborate.

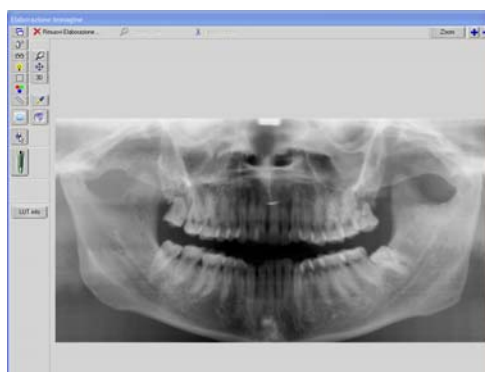


Pic. 6.42

You can modify the image by the buttons on the left side of the window.

Buttons on the right side of the image, on the top, modify dimensions of the window or of the image displayed.

Buttons   zoom and reduce image displayed. The button  consents to modify the image dimension.



Pic. 6.43

The previous picture show the enlarged image at the resolution of the sensor of picture 6.42. To move the image into the window, you have to click the left button of the mouse and holding it pressed, move it. You will move the image according the direction of the mouse movements.

Elaboration of images: Meaning of the buttons.



Arrange windows.

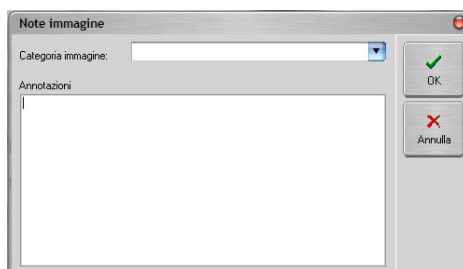
You can open more than one image at the same time, just double clicking on them. This function consents to arrange all the open images to put them on the screen without superimposition.



Write annotation.

Click on this button and the window of the picture number 6.42 will appear, to write any annotation on the image. To save click on **OK**.

Text written in the first line will appear in the image preview. You don't have to write too much text in the first line, to reproduce it in the preview image. The image's category will be used to display previews.

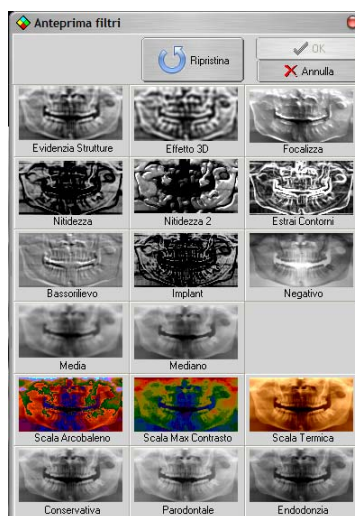


Pic. 6.44



Filters.

Clicking on this button the following window will appear:



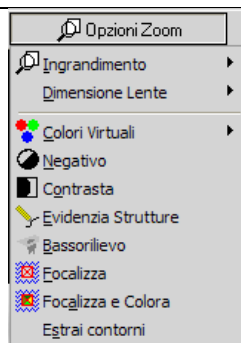
Pic. 6.45

You can select one of the filter represented in picture 6.45 and apply it on your image. The selected filter will execute on the preview image. **Restore** button removes the preview filter. To confirm it click on **Ok**. To remove the filter, when applied, click on **Delete elaboration**.



Dynamic zoom

After clicking on Dynamic Zoom, you can set options through “**Zoom Options**” in the upper part of the window. Clicking on this button, the following menu will appear:



Pic. 6.46

Zoom: it is possible to zoom 5 different images in contemporarily. If you select zoom **x1** you obtain the real dimension filter.

Lens Size: it selects the lens size

Virtual colours: it selects the virtual coloration to apply on the image.

Negative: it applies the inversion of colours filter (from negative to positive or vice versa).

Contrast: it contrasts more the image in the portion visualized by the lens.

Structure enhancement: it applies the Structure enhancement filter to the portion visualized by the lens.

Emboss: it applies the emboss filter to the portion visualized by the lens. **Detail:** it applies the detail filter to the portions visualized by the lens.

Detail and Virtual Colours: it applies the detail and virtual colours filter to the portion visualized by the lens.

Contour detection: it applies the contour detection filter to the portion visualized by the lens



Contrast and brightness

It modifies the contrast and the brightness of the image using the "gamma factor". This way is much more definite than the simple contrast/brightness function. The gamma factor is an exponential function and not a linear one, so it can better optimize the images. To modify the contrast and the brightness bring the mouse in the middle of the image, then click and keep clicked on with left click. Move the mouse to modify contrast and brightness.

Clicking on this function, the following window will appear:



Pic. 6.47

Meaning of the buttons:

	Decrease the gamma value
	Restore the default value for gamma factor

	Increase the gamma value
	Decrease contrast
	Restore the default value for contrast
	Increase contrast



Image orientation

Clicking on this button, you will see the following window:



Pic. 6.48

Meaning of the buttons:



Mirror horizontal



Flip vertical



Rotate the image 90 degree to the left



Rotate the image 90 degree to the right.



Cut a region

Cut a part of the selected image.

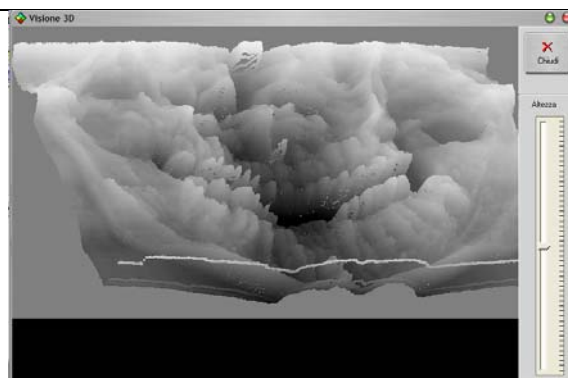
- Left click on **Cut a region** button;
- Bring the mouse nearly the region you want to cut;
- Select with left click the region to cut;
- Click on  **Esegui ritaglio** on the top of the window.



3D SIMULATION.

Using this function, you can value the X-Ray as a 3D vision. The calculating of third dimension is based on radio-opacity, which is the X radiation quantity that is passed through the object. The 3D image is visualized in a dynamic way, so you can change the point of view.

- Click on the function with the left button of the mouse and the following window will appear:



Pic. 6.49

- Bring the mouse in the middle of the image, then click on it with the left button of the mouse,
- Keeping pressed, move the mouse on horizontal/vertical axis to modify the point of view;
- Modify the height with the cursor in the right part of the window;
- Click on **close** to go back to the starting image.



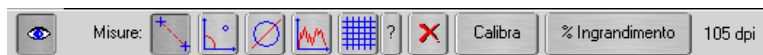
COLOR ANALYSIS

This function analyses the image's RGB values. Moving the mouse on the image, it shows the RGB value of one small portion under the mouse indicator.



Measures

Clicking on this button, the following window will appear:



Pic. 6.50



ADVICE:

The radiographies are a bidimensional representation of three-dimensional object places in the space; therefore, their representation can be deformed in function of various factors, what enlargement, relative position of the object in comparison to the receptor of image, etc. These factors do not allow therefore a precision quantifiable of the trial.

QuickVision DICOM® is not a tool of measure because, also after the procedure of calibration of the measure in comparison to a known repere, the accuracy of the same measure cannot be guaranteed, that therefore it has to be considered as indicative.

Meaning of the buttons:

	Measure the distance between two points
	Measure an angle
	Measure a circle
	Measure the density

	Show grid
	Delete measures
	Calibrate measure
	Zoom



Measure the distance between two points

- Bring the mouse till the first point;
- With left click, drag the mouse till the second point;
- Release the mouse



Measure an angle

This function permits the measure of the angle made between two segments

- Bring the mouse till the first point;
- With left click, drag the mouse till the second point;
- Release the mouse

Repeat these operations keeping attention to start measuring from the second point of first measure.



Measure a circle

- Bring the mouse corresponding of the centre of the diameter you want measure;
- Left click while drag the mouse to increase/decrease the diameter.



Measure the density

This function measure the density, or better the radio-opacity (grey level), of a line indicated with the mouse

- Move the mouse corresponding with the zone to control;
- Click in.



Grid

This function put a grid on the image.



Pressing  you can specify the greatness of the squares of the grate.



Delete

This function delete all the measures.



This function allows to calibrate the effected measures.



With this function you can zoom the image.



WRITE TEXT AND DRAW ON THE IMAGE

Clicking on this function, the following window to modify the image will appear:



Pic. 6.51

Meaning of the symbols:

	Show/hide the text and the draw		Display the stamp
	Select object		Delete the selected object
	Draw a circle/ellipse		Select the color to use
	Draws lines		Select the font
	Draws rectangles/squares		Select the line width
	Write tool		Enable/disable the object fill



SHOW TO FULL SCREEN

This function permits to visualize the image to full screen. To go back, left click with the mouse in any point of the screen or press ESC from the keyboard.



PRINT IMAGE

Send the selected image to the print window. You will see the following window:



Pic. 6.52

Tools. In this print window, there are many instruments:



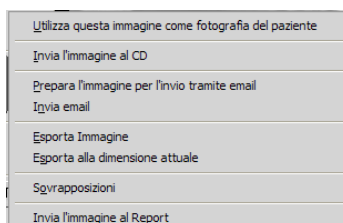
Pic. 6.53

These buttons are useful to orient image on the paper, to set negative/positive or to reduce and enlarge image dimension.



OPTIONS

These functions open a menu with image's options:



Pic. 6.54

Use this image as patient's photography

The software uses the image that you can see in the elaboration window as a patient's photo. The program uses this photo for print documents and for management of patient's data.

Send image to CD

Send the selected image to CD. The program inserts a viewer also. Through this viewer, you can create a CD and put it in any computer with Windows® to display all of the images.

Send image to email

Prepare the image to send it to email. This function is very useful if you need to send more than one image in the same message. The program inserts a viewer also. Through this viewer, you can see all of

the images in any computer with Windows®. When you send the viewer through an email, it will be renamed. This is why the email programs usually does not allow to send executable program, because they can be dangerous and spread virus.

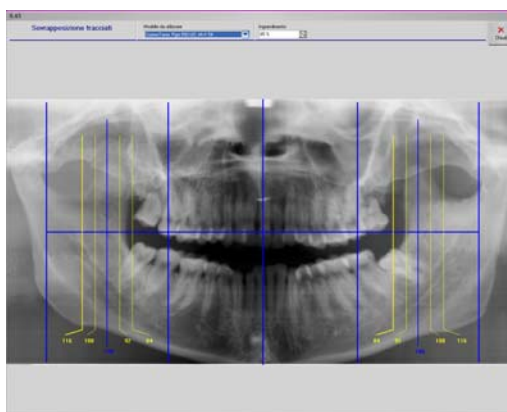
The receiver has to rename the program as he can see in the email.

Before using email, we suggest you to install on the computer an antivirus system.

To send the email, you have to use your email program installed on you PC. The program will not send immediately the message: it will put the email in a list of "message to send". To send the email, open your email program and select "Send/Receive" or something similar.

Superimpositions

You can put on the image some tracks, as you can see in the following picture:



Pic. 6.55

IMAGES ACQUISITION

If you select images' page, in the upper side of the window, you will see all the buttons to take images from: videoradiography system, scanner, photo camera, video camera and panoramic.

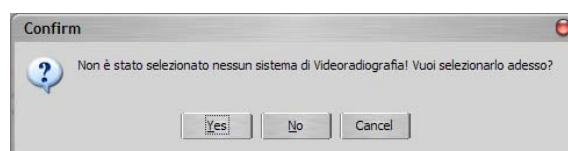


Pic. 6.56



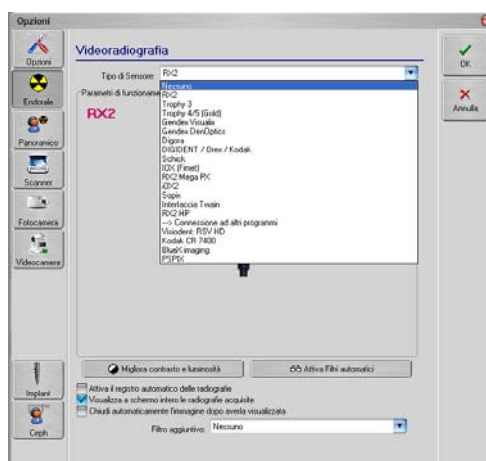
X-RAY ACQUISITION.

Clicking on one of these two button, you can take images from video radiography sensor. If you don't have select any sensor, the program will invite you to select one.



Pic. 6.57

If you answer YES, the following window will appear:



Pic. 6.58

You will have to indicate the selection of sensor in your possession with all the parameters related to its operation. For more details on the sensor, refer to the technical or commercial that has provided you the system.

You can open the configuration at any time using the Options menu in the image window.

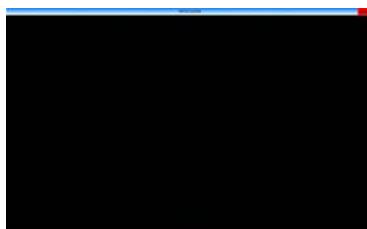
If you press the left button of the mouse on the acquisition icon, you press the right one; the configuration window will open as if no sensor is already configured.



VIDEO CAMERA ACQUISITION

If you click on this button, you will activate the acquisition by camera. The program will try to find if there is a camera connected to the computer. If the computer finds it, it will try to use the following typical settings. In any case, you can set up your own personalized choice.

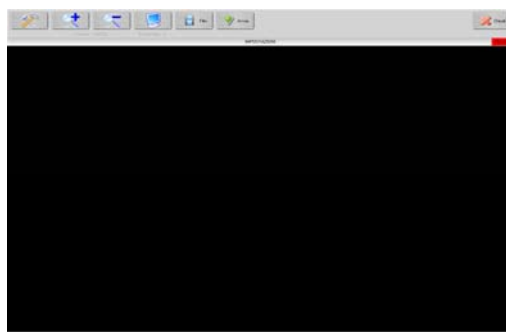
Activating the camera, you will see the following window:



Pic. 6.59

We have chosen this kind of display to leave most of the space on the video to the image captured by the camera. The two blue bars positioned respectively at the top and bottom of the window, displays all the functions that you can use into this window.

Placing the mouse on the blue bar at the top, the following menu appears:

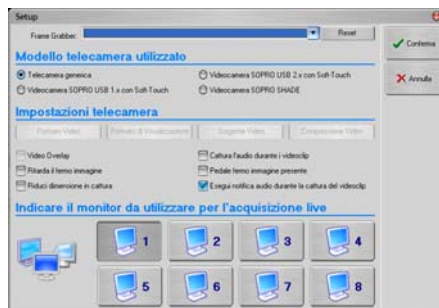


Pic. 6.60

List of the functions



This function allows to set up the program.

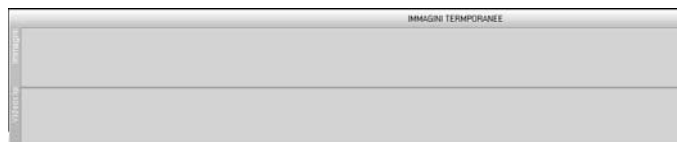


Frame grabber: Indicates the card you want to use for the acquisition.

Camera model used: indicates the model of the camera.

	Camera Settings: customize the camera settings. Before you change these settings, ask for the assistance to those who provided the camera.
	Enlarges the size of the image displayed.
	Reduces the size of the image displayed.
	You can change the division of the screen each time you press this button. The subdivision can be: 1 image -> 2 images -> 3 images -> 4 images
	Switches from single-image mode to capture movie or vice versa.
	Starts or stops the acquisition of a single image or a video clip.
	Finishes the acquisition procedure. When you close the window, the program delete all the not stored images.

Placing the mouse on the blue bar at the bottom, the following menu appears:



Pic. 6.61

The lower part of the window is divided into two brackets. The upper band contains the individual captured images; the band at the bottom contains the captured video. To store the pictures or videos you have to press the right mouse button on each image and select "Save".

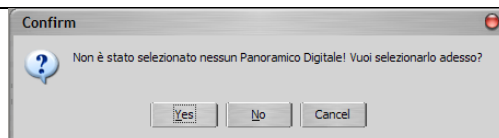
When you close the window, the program delete all the not stored images.



PANORAMIC ACQUISITION.

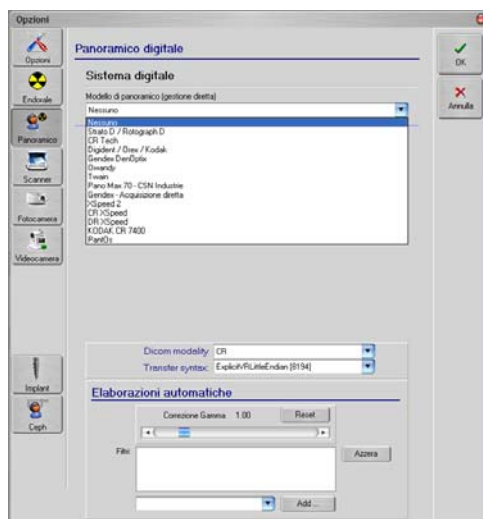
Clicking on this button, you will activate the panoramic acquisition. You have to set up the panoramic to use by the Options menu of the images window.

For more convenience, we quote an example. If you have not selected the digital panoramic in your possession, you will be asked the following question:



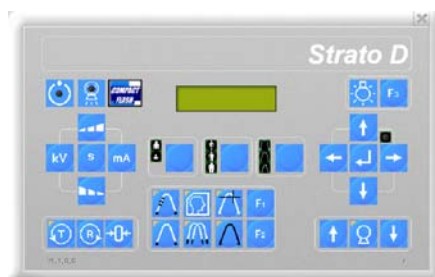
Pic. 6.62

If you ask **YES**, the configuration page will open:



Pic. 6.63

After you have confirmed your choice, you will get the following window (in this example we simulated the Panoramic layer D).



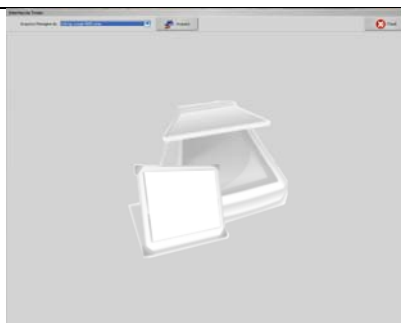
Pic. 6.64

The virtual keyboard allows you to control the panoramic device directly from the computer (except for all the mechanical movements that, for safety reasons, must be controlled being close to the patient). Initiating the acquisition, the image will be transferred automatically to the archive of the patient, displaying a preview during the acquisition phase.



SCANNER ACQUISITION.

Clicking on this button, you active scanner acquisition. The following window will open:



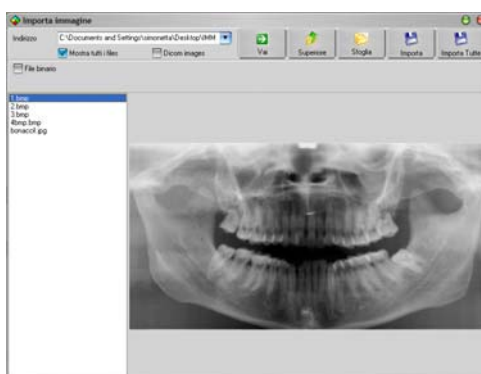
Pic. 6.65

You have to select the scanner to acquire an image and click the Scan button. The windows displayed in the acquisition phase are related to the type of scanner you purchased. For more details, refer to the operation manual of the scanner.



DIGITAL CAMERA ACQUISITION

Clicking on this button, you active digital camera acquisition using disk mode. The following window will open:



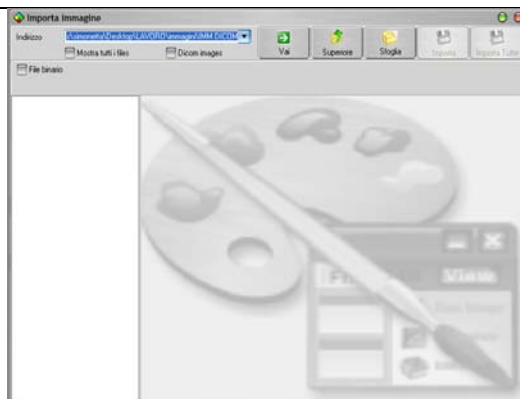
Pic. 6.66

You have to browse the disk and folder of the camera connected to the computer; check if the image is the one you want by clicking with the mouse on the file name and view the preview; select the **Import** button to import a single image or **Import All** to import all the images in the folder. The images will be stored in the archive of the selected patient.



FOLDER ACQUISITION

Clicking on this button, you active acquisition by folder. The following window will open:



Pic. 6.67

You have to browse the disk and the folder where the images to be imported are stored; check if the image is the one you want by clicking with the mouse on the file name and view the preview; select the **Import** button to import a single image or **Import All** to import all the images in the folder. The images will be stored in the archive of the selected patient.

When you click **Browse**, select the folder that contains the images you want to import: in the left part of the window will list all the images in the selected folder.

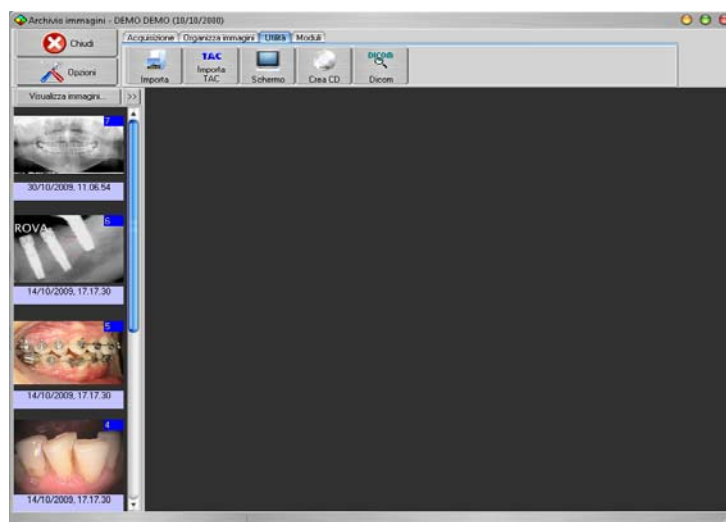
Clicking with the left mouse button on the name of each picture you can see a preview of the selected image.

Select the required image and click Import.

The image will be stored in the archive of the patient.

7. 3D IMAGES

3D IMAGES MANAGEMENT



Pic. 7.1

3D IMAGES

This function allows you to view images from a CT or CBCT exam in 3D.

To use this feature, you must be in possession of the 3D module of the program. In order to develop a 3D exam you can import it from a disk or capturing by equipment interfaced to QuickVision DICOM®.



WARNING:

The reconstruction of the paraxial images occur on the perpendicular of the panoramic curve drawn by the user. The distance among the reconstructed cuts and the dimension of the perpendicular segment to the panoramic curve, that determines the width of the paraxial image, are configurable parameters from the user.

The maximum error produced by the reconstruction is two pixels. The error maximum converted in measure is equal to the dimension of the voxel in the axial plan of the axial image multiplied for two. The dimension of the voxel, converted in millimetres, is accessible from the menu "Project" to the voice "Information Project". The parameter "Thickness image" it points out the dimension in millimetres of the voxel. Supposing a dimension of the voxel of 0.170 mms, the maximum error introduced by the reconstruction will be equal to $0.170 \times 2 = 0.340$ mms.

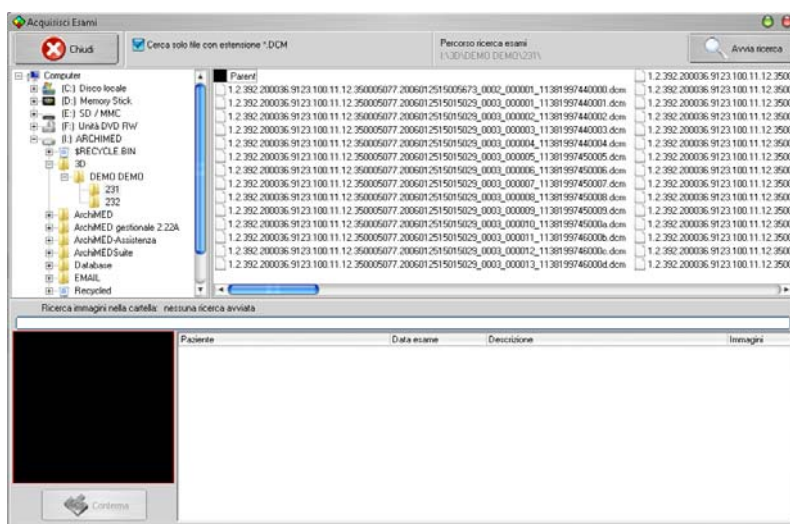
The error of the reconstruction is the theoretical error supposing that the patient has correctly been positioned, according to the indications of the furnished by the producer of the X-ray instrument, and that the reconstruction has been successfully.

QuickVision DICOM® is not a tool of measure because, also after the possible procedure of calibration of the measure in comparison to a known repere, the accuracy of the same measure cannot be guaranteed, that therefore it has to be considered as indicative.



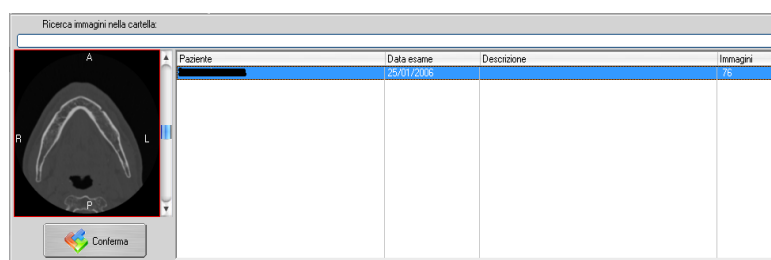
Import a TC o CBCT exam

Click on this button to import images of a TC o CBCT exam and the following window will appear:



Pic. 7.2

Select folder or disk where TAC images are and press the **"Start Search"** button, the selected folder will be moved towards the bottom of the window as shown below:

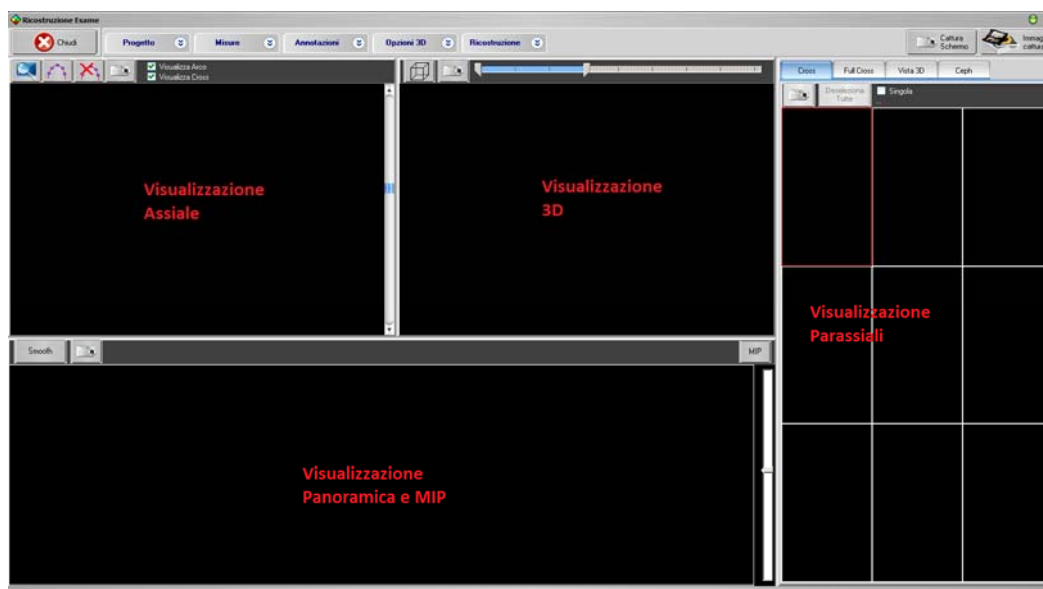


Pic. 7.3

Double click on the folder containing the images and press the **"Confirm"** button. QuickVision DICOM® import all axial images of the selected exam. When it finishes importing the data into the patient's record, QuickVision DICOM® will automatically starts the process of 3D reconstruction.

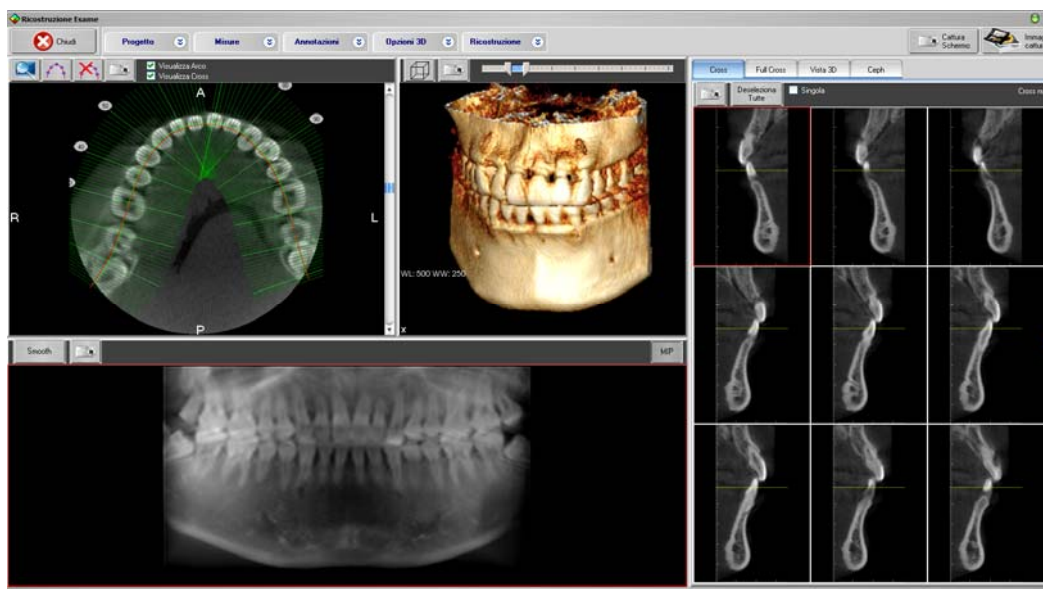
Reconstruction window

Reconstruction procedure has the following layout:



Pic. 7.4

Example:



Pic. 7.5



WARNING:

The 3D reconstruction uses the information of the axial images. If this information are wrong or they contain any mistake, unpredictable result are expected.

Create the panoramic arch

The first thing to do in order to proceed with 3D reconstruction is to trace the panoramic curve. The panoramic curve identifies the position of the dental arch. Before starting to trace the panoramic arch, it is advisable to select the axial image containing the region of interest - the dental arch of the upper or lower jaw. The best position for tracing the arch is according to the region of interest, the best area where to place the curve is in the half of the length of teeth roots, where the root canals are good points for the curve.

Click on the following arch button to trace a new panoramic arch.



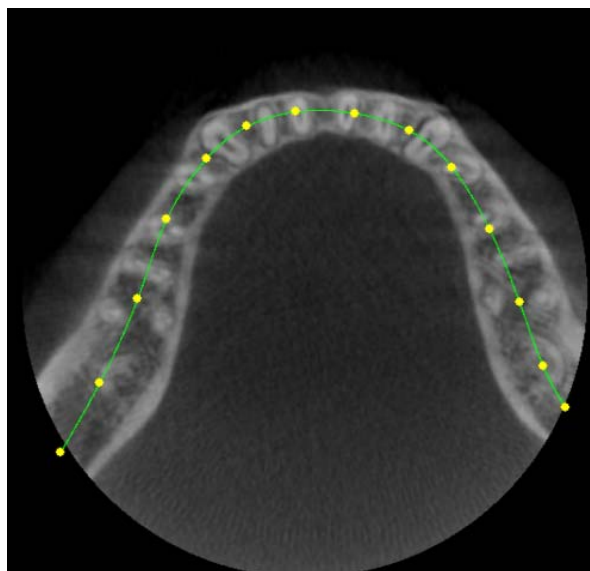
Put the mouse cursor over the image and press the left mouse button to fix all the dots on the panoramic arch. In the event of error, you may move the dots added by clicking with the left mouse button on each yellow dot again and dragging it into the right position. Use the right mouse button on a yellow dot to delete dots or insert a new intermediate dot.

When you have finished tracing the panoramic arch, press the arch button again. QuickVision DICOM® will then calculate all the cross sections.

You can use this button to edit a panoramic arch you have already entered. To change the position of the dots, put the mouse pointer near the point to be moved, press the left mouse button and hold it down while you move the dot into the new position.

If you move the scroll bar of the cross images, you can see the reference slices shown on the axial image. You can do the same thing by moving the scroll bar of the panoramic slices.

To move the axial and cross-reference position, click on the panoramic sections.



Pic. 7.6

If you want to hide the panoramic arch, remove the check from "**Show Arch.**" If you want to hide the paraxial image displayed near the panoramic arch, uncheck the option "**Show Cross.**"



Press this button to delete the panoramic arch and to draw one new.

AXIAL VIEW

**NOTA:**

The visualization of the axial images is arranged as if the patient was observed by the feet toward the head.

In the axial view window, the following functions are available:

- Scroll all images from top to bottom and from bottom to top. To scroll images you may use the scroll bar on the right of the axial images or the mouse wheel.
- Optimize contrast and brightness. To adjust these values, press the right mouse button and hold it down while moving it on the image until you obtain the desired result. Changes in contrast and brightness will also affect all the other views except 3D rendering.
- To view information on the position and grayscale value of a pixel, press the CTRL button on the keyboard and hold it down while pressing the left mouse button.



Enlarges axial image.



With the Camera button, you can capture the axial image displayed.

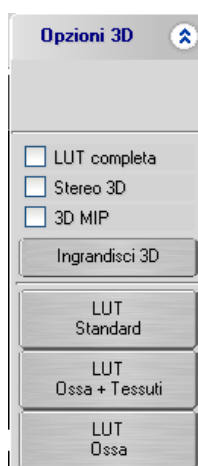
The captured image will be sent to a temporary folder of captured images and they may be used to create a report.

3D VIEW

In 3D view, you can use the following functions:

- **Rotate the orientation.** Press the left mouse button and hold it down, then move the mouse. The orientation of the volume change according to the movements of the mouse.
- **Enlarge / Reduce the size of the volume.** Use the mouse wheel to zoom in (turn up) or decrease (turn down) the volume size. The regeneration of the volume is a task that may take a little time. Do not move the mouse wheel too quickly.
- **Move the 3D volume.** Press the mouse wheel and, keeping it pressed, move the mouse. The volume will move according to the mouse movements.
- **Change the selection of the gray levels represented.** At the top of 3D view, there is a tool to select the minimum and maximum level of gray to represent. To move the references, click on the "handle" of the minimum value and move it. Do the same thing with the "handle" of the maximum. To move both select the area between the two blue handles and move the mouse. This feature is very important to select the identity of the fabrics to display. The soft tissues are left. As you move to the right show bones, teeth and metals

In "3D Options" menu, there are functions you need for 3D volume.



Pic. 7.7

3D Module: Full LUT.

Find a position for the range selector to display the most important informations.

3D Module: Stereo 3D.

Enable / Disable the stereo 3D option. When this option is enabled, you can see a real 3D image. To get the correct effect you need special glasses with one red and one green glass.

3D Module: 3D MIP.

Display the 3D MIP (Maximum Intensity Projection). This option allow you to see inside the volume.

3D Module: Zoom 3D View.

Make a zoom of the 3D View.

3D Module: LUT Standard.

Apply the LUT gray levels standard.

3D Module: LUT Bone + Muscles.

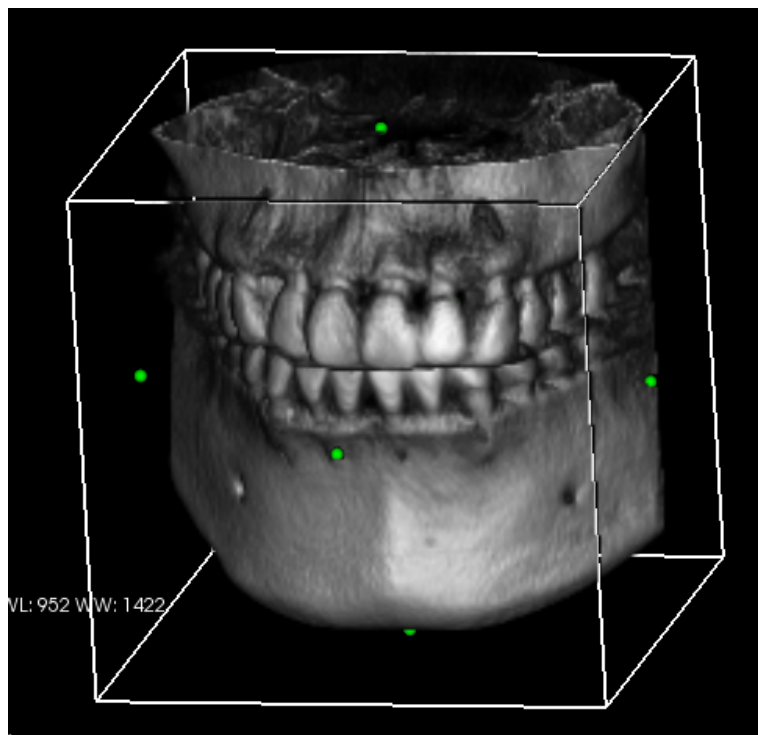
Apply the LUT to enhance the Bone and the Muscles.

3D Module: LUT Bone.

Apply the LUT to enhance the Bone.



Display a cube to crop the volume, as you can see in the following picture:



Pic. 7.8

To crop the volume you should move the mouse near on of the green marker, press the left mouse button, hold it and move the mouse to crop the volume.



Create a snap shot of the current volume. The snap shot repository can be used to create a medical report.

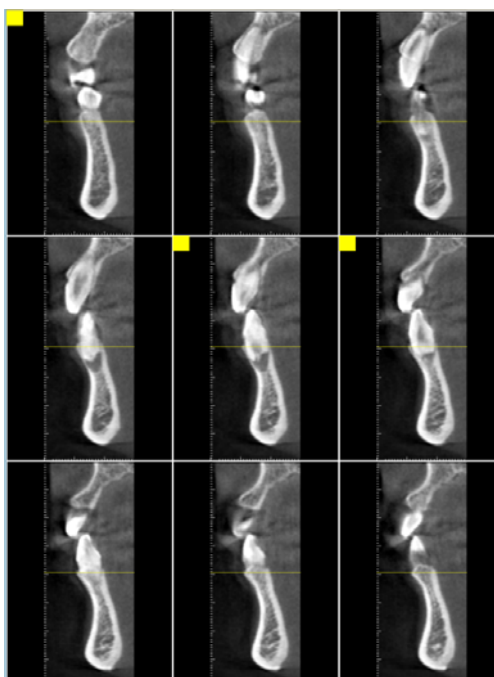
CROSS SECTION VIEW

In the Cross section view, you can use these options.

- Scroll the images from top to bottom and bottom and from bottom to top. To scroll the images you can use the scroll bar on the right of the axial images or you can use the mouse wheel.
- Arrange the brightness and contrast. To modify these values click and hold the right mouse button and move it on the cross image. These changes will affect all views.
- Press the CTRL key and hold it, then press the left mouse button. The application will display the information for the pixel position and the pixel gray level value.



Create a snap shot of the selected cross images. To select the cross images click with left mouse button in the top-left of the image box.



Pic. 7.9

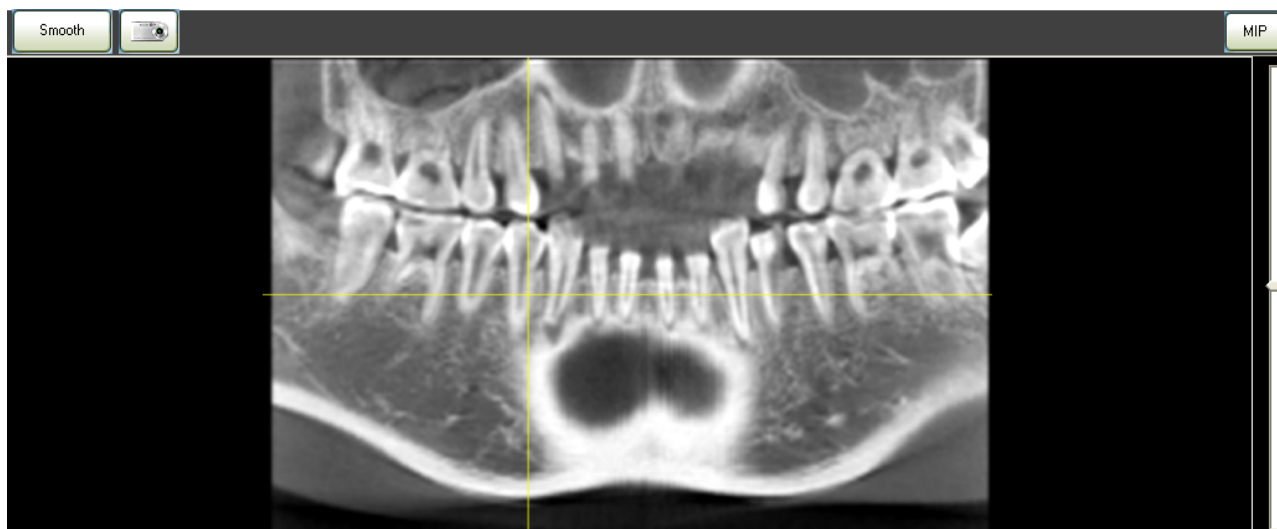
The yellow marker inform you that the image is selected. To unselect the image click on the yellow box. If you want to zoom a single cross image, check the box **"Single"**. The application will display a single cross image.



Pic. 7.10

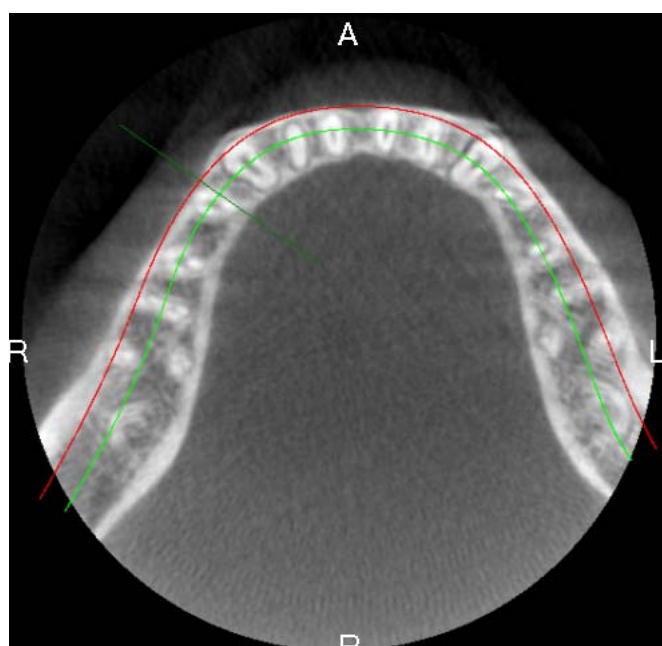
PANORAMIC VIEW

The panoramic view contains the panoramic sections calculated around the panoramic arc.



Pic. 7.11

To change the panoramic arc of interest you can use the scroll bar on the right. If you want know the position of the active panoramic section you can see the axial view.



Pic. 7.12

The green arc represents the original panoramic arc, the one created from the user. The red arc represents the arc calculated and displayed in the current panoramic section view.

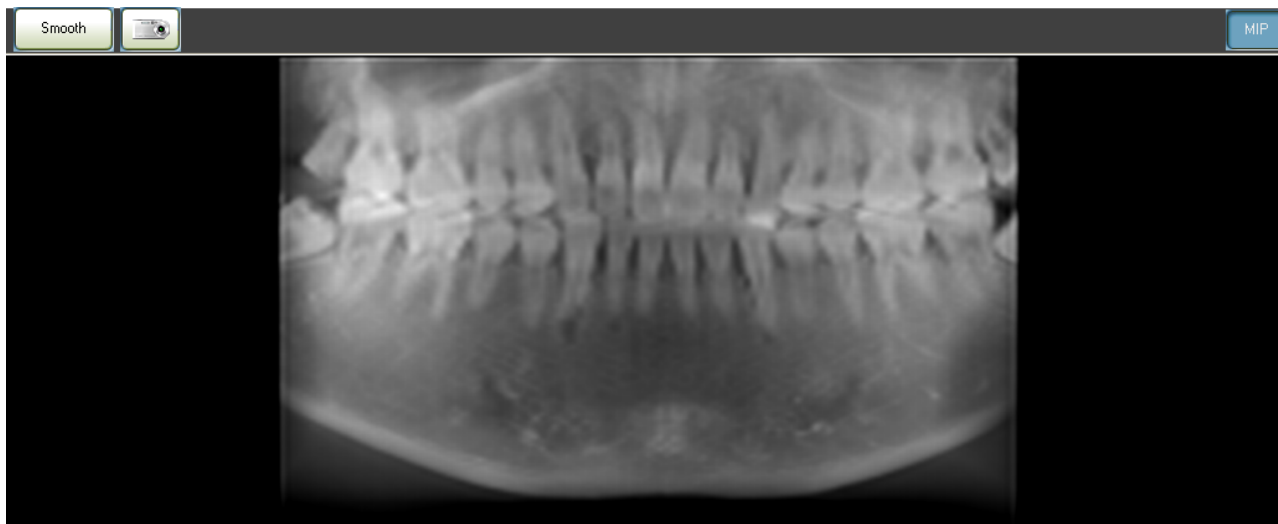
The **smooth** option enables a smoothing filter.



Captures panoramic image and send it to the captured images' database. You can use captured images to create a report.



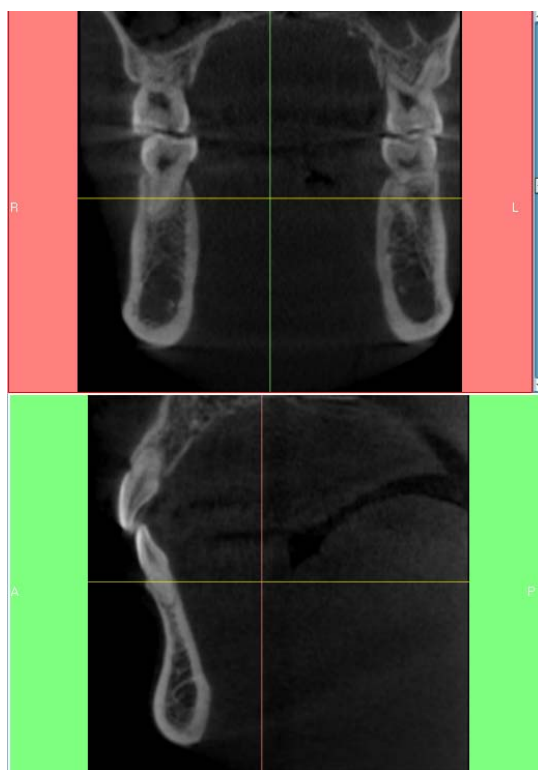
Create a MIP (Maximum Intensity Projection) of the panoramic view. The final image is created starting from all the panoramic arcs.



Pic. 7.13

FULL CROSS VIEW

In the full cross view, the application creates two sections. Both sections are created from the axial image dataset.



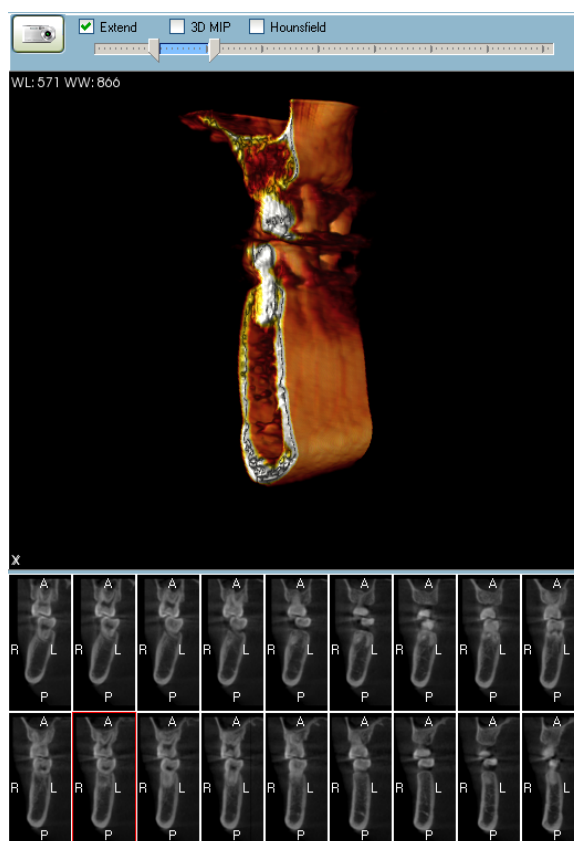
Pic. 7.14

The top section is created from the right to the left of the patient (L/L view). The bottom section is created from the anterior to the posterior of the patient (A/P view)

The background colour helps the user to identify the reference line in the other view. Any line create in any view has the same colour of the source data. For example in the axial view the light green line represent the full cross A/P.

CROSS 3D VIEW

The 3D cross view is a very innovative 3D reconstruction. This reconstruction uses the cross images to create a 3D volume.



Pic. 7.15

The 3D image is created using 18 cross frame. It is possible to use 9 frames also, unchecking the option **"Extend"**.

In the top of the 3D View there is a range selector. Moving the minimum and the maximum position of this selector, you can select the tissue density to evaluate. If you move it to the left you will enhance the soft tissue. If you move it to the right you will enhance the hard tissue.

In the 3D view you can use these options.

- Rotate the orientation. Click and hold click the left mouse and move it. The volume orientation will change according the mouse movement.
- Zoom in and out. You can use the mouse wheel to enlarge and reduce the 3D volume view.
- Click and hold the mouse wheel and move the mouse. The volume will move according the mouse movements.

If you check the option “MIP” you will see a transparent volume.

HOUNSFIELD

The Housfield method display the cross, using pseudo colours. These colours will help you to better know the tissue quality. The classification is D1, D2, D3, D4.

D1 represent the softest density and D4 the hardest density.

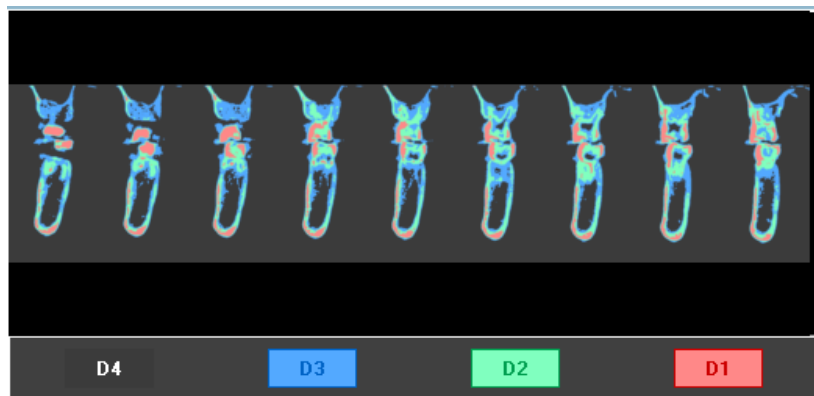


Figura 7.15.1

If you double click on any images the application will move the images on a new window, In this window you can zoom the images.



ADVICE:

The visualization of the Hounsfield (HU) units doesn't reflect the corresponding visualization of the HU units obtainable with the TC system because the software has not been projected for a correct visualization of HU units.

This function cannot be used for diagnostic purposes.

CEPH VIEW

The Ceph view create two Ceph projection: A/P and L/L.

MEANING OF THE BUTTONS



Project menu



Pic. 7.16

Save Project

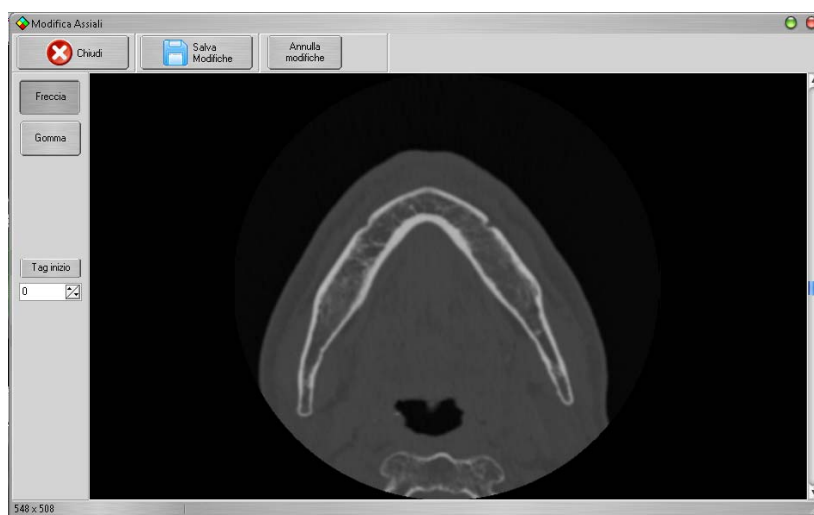
Save the current project, saving the panoramic arc and the view option. The cross images and the panoramic images are not saved but they are created any time you will open again the project. This method ensure to avoid any problem.

Restore Project

Restore the project to the original data, deleting any modification of the axial images. The panoramic arc is deleted included any cross and panoramic sections.

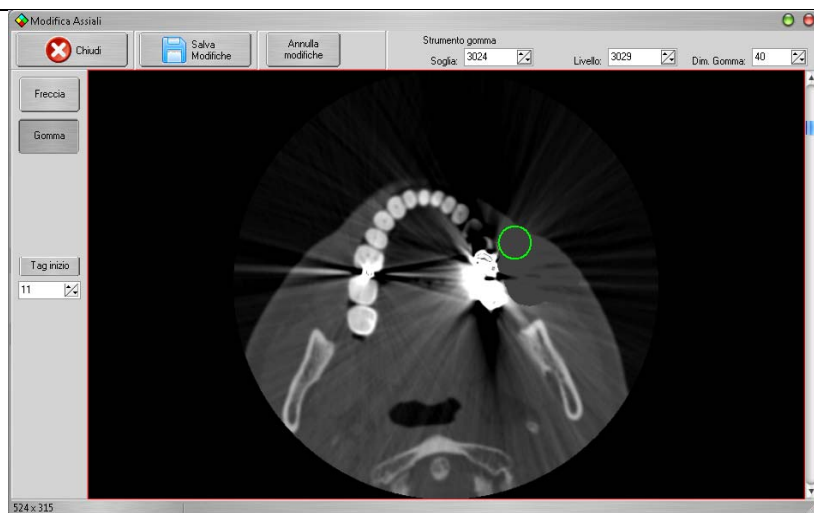
Edit Axials

Open a powerful editor to modify the axial images. This edit is very useful to clear the metal artefact from the images.



Pic. 7.17

Select the image from which you want to start to modify, then press **“Tag Begin”**. Scroll the images using the scroll bar or the mouse wheel to select the last image that you want to modify. Pressing the button **“Rubber”**, a green circle will appear; it represents the size of the rubber to use. To modify the rubber size select the size in the left part of the following window:



Pic. 7.18

It is also possible to modify the threshold and the level of the rubber and its size. To work on a single image just click the left mouse button and holding it moving around the image. If you want to work on multi image, hold the CTRL key before click the left mouse button.

To clear a part of the image, it is necessary to move the rubber on the point of the image that you want to modify and, holding pressed the left button of the mouse, move the rubber on the part of the image to cancel.

Once you effect all the changes press **“Save Changes”**.



Export slices

Export the slices (axial images) to a folder selected by the user. When the export process is finished, the application will open the destination folder automatically.



Measures



NOTE:

QuickVision DICOM® effects the volumetric reconstruction (or 3D) of the maxillo-facial complex departing from DICOM images gotten with special softwares (Dentascan or similar coming from TC) or that use the technology ConeBeam CT.

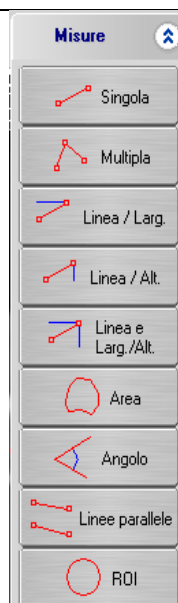
The volumetric reconstruction effected by QuickVision DICOM® is checked by the contained parameters in the DICOM images of departure.

QuickVision DICOM® performs an accurate control of such parameters but it cannot guarantee the correctness and accuracy, which depend on the system that has performed the examination, therefore the measures have to be considered as indicative.

The volumetric reconstruction can only be used in the systems of implant planning when the instructions are followed given by the provider of the system of planning.

Particularly, the images used to this purpose have always to include the relative support used by such systems for the calibration of the geometric ownerships of the system.

Pressing this button, the following menu will open:



Pic. 7.19

You can resize all measures on the image and move them with the mouse.

Single: this function allows to take single measures to the image.

Proceed in the following way:

- move the mouse cursor in the point from which you want to start the measurement and press the left key of the mouse;
- move the mouse cursor in the final point of the measure and press the left key of the mouse; it will appear the effected measure.

To delete an existing measurement it is necessary to click with the left mouse button on the measure to remove cancel and press the key "Canc." from the keyboard.

Multi: this function allows to effect multiple measures to the image.

- move the mouse cursor in the point from which you want to start the measurement and press the left key of the mouse;
- move the mouse cursor in the final point of the measure and press the left key of the mouse; it will appear the effected measure.

Repeat this operation to measure a new segment.

To finish the measurements process press the right button of the mouse.

To delete an existing measurement it is necessary to click with the left mouse button on the measure to remove cancel and press the key "Canc." from the keyboard.

Line / Width.: this function allows to take the measure of the width and the distance.

Proceed in the following way:

- move the mouse cursor in the point from which you want to start the measurement and press the left key of the mouse;
- move the mouse cursor in the final point of the measure and press the left key of the mouse;

To delete an existing measurement it is necessary to click with the left mouse button on the measure to remove cancel and press the key "Canc." from the keyboard.

Line / Height: this function consents to measure a distance and its projection on the vertical section.

Proceed in the following way:

- move the mouse cursor in the point from which you want to start the measurement and press the left key of the mouse;
- move the mouse cursor in the final point of the measure and press the left key of the mouse;

The program will show the line dimension and its vertical projection.

To delete an existing measurement it is necessary to click with the left mouse button on the measure to remove cancel and press the key "Canc." from the keyboard.

Line and Width / Height: this function allows to take the measure of the width and the height and the distance.

Proceed in the following way:

- move the mouse cursor in the point from which you want to start the measurement and press the left key of the mouse;
- move the mouse cursor in the final point of the measure and press the left key of the mouse;

To delete an existing measurement it is necessary to click with the left mouse button on the measure to remove cancel and press the key "Canc." from the keyboard.

Area: this function allows to calculate an area inside the image.

Proceed in the following way:

- click with the left mouse button in the centre of the circle and click with the left button.
- Adjust the circle size moving the mouse inside the circle, click with the left mouse button and holding the button move the mouse to resize the circle.

To delete an existing measurement it is necessary to click with the left mouse button on the measure to remove cancel and press the key "Canc." from the keyboard.

Angle: this function allows to calculate the angle included in two segments.

Proceed in the following way:

- move the mouse cursor in the point from which you want to start the first segment and click with the left mouse button.
- move the mouse cursor at the end point of the first segment and click with the left mouse button.
- move the mouse cursor at the end point of the second segment and click with the left mouse button.

To delete an existing measurement it is necessary to click with the left mouse button on the measure to remove cancel and press the key "Canc." from the keyboard.

Parallel lines: this function allows to calculate the distance among two parallel lines.

- move the mouse cursor in the point from which you want to start the first segment and click with the left mouse button.
- move the mouse cursor at the end point of the first segment and click with the left mouse button.
- move the mouse cursor in the first point of the first segment and click with the left mouse button.
- move the mouse cursor at the end point of the second segment and click with the left mouse button.

To delete an existing measurement it is necessary to click with the left mouse button on the measure to remove cancel and press the key "Canc." from the keyboard.

ROI: this function allows to calculate the gray level value in a ROIS.

Proceed in the following way:

- put the cursor of the mouse on the image point where you want to calculate the ROI, then press the left button of the mouse.
- resize the ROI as you want.

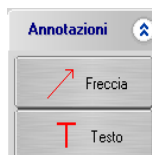
The program will show the value.

To delete an existing measurement it is necessary to click with the left mouse button on the measure to remove cancel and press the key "Canc." from the keyboard.



Notes Menu

Pressing this button, the following menu will open:



Pic. 7.20

Arrow: this function allows to insert on the image arrows inserting besides a text that will appear next to the arrow.

Proceed in the following way:

- move the mouse cursor on the first point of the arrow and click with the left mouse button;
- move the mouse cursor on the end point of the arrow and click with the left mouse button; the following window will appear:



Pic. 7.21

Insert the text that you want to show near the arrow and press **OK**.

To delete an arrow with the text, click with the left button of the mouse on the arrow and press the key "Canc" from the keyboard.

Text: this function allows to insert any text on the image.

Proceed in the following way:

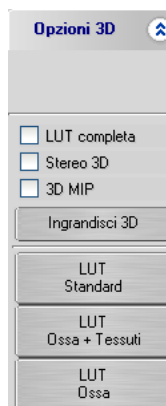
- move the mouse cursor on the top left position of the area where to insert the text and to press the left button of the mouse;
- move the mouse cursor on the bottom right position of the area where to insert the text and to press the left button of the mouse;
- Insert the text and press **OK**.

Opzioni 3D



3D Options menu

Clicking on this button, the following menu will appear:



Pic. 7.22

Full LUT: Select the standard lut to display the preset bone tissue.

Stereo 3D: Apply the elaboration to display a real 3D image. To have the 3D simulation you need to use special 3D glasses with a red glass and a green glass.

3D MIP: Apply the Maximum Intensity Projection calculation to display the image using the transparency.

LUT Standard: this function allows to apply the LUT Standard, using the standard gray levels.

LUT Bones + Tissues: this function allows to apply the LUT to enhance the bone tissue and the muscle tissue.

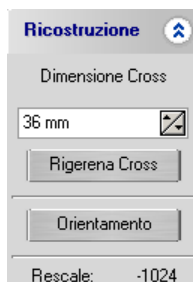
LUT Bones: this function allows to apply the LUT to enhance the bone tissue.

Ricostruzione



Reconstruction Menu

Clicking on this button, the following menu will appear:



Pic. 7.23

This function allows to modify the size of the cross images. To apply a new value you need to modify it and press “**Regenerate Cross**”, the software will display paraxial images with the new dimension.



Clicking on this button, the software apply Smooth filter to the panoramic plane.

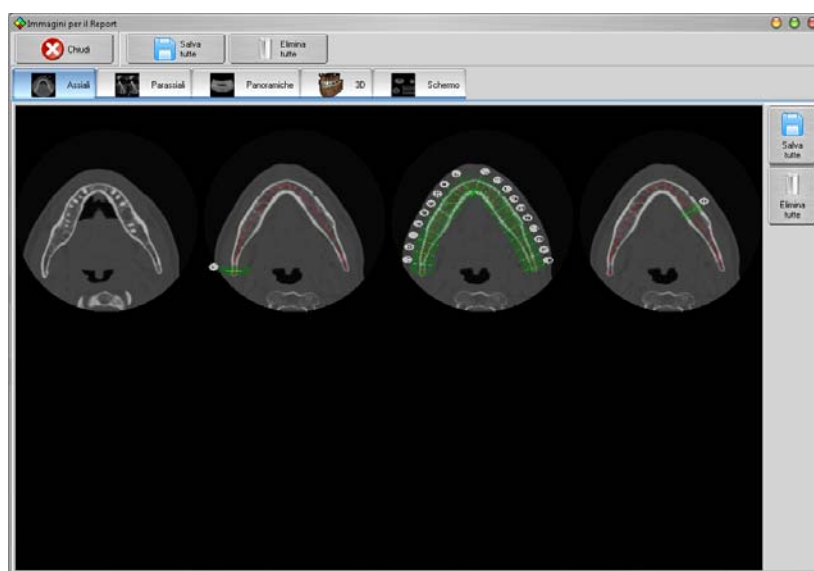


Clicking on this button, you can capture the displayed screen.



Captured Images

You can show the captured images using this function.

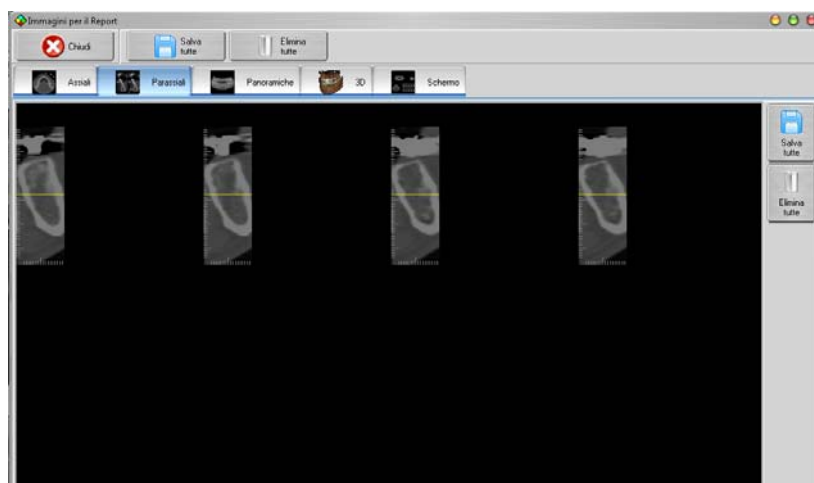


Pic. 7.24

Picture number 7.15, show all captured images.

To save all the captured image for the selected category you can click on “Save All” on the right of the screen.

To delete all the captured image for the selected category you can click on “Delete All” on the right of the screen.

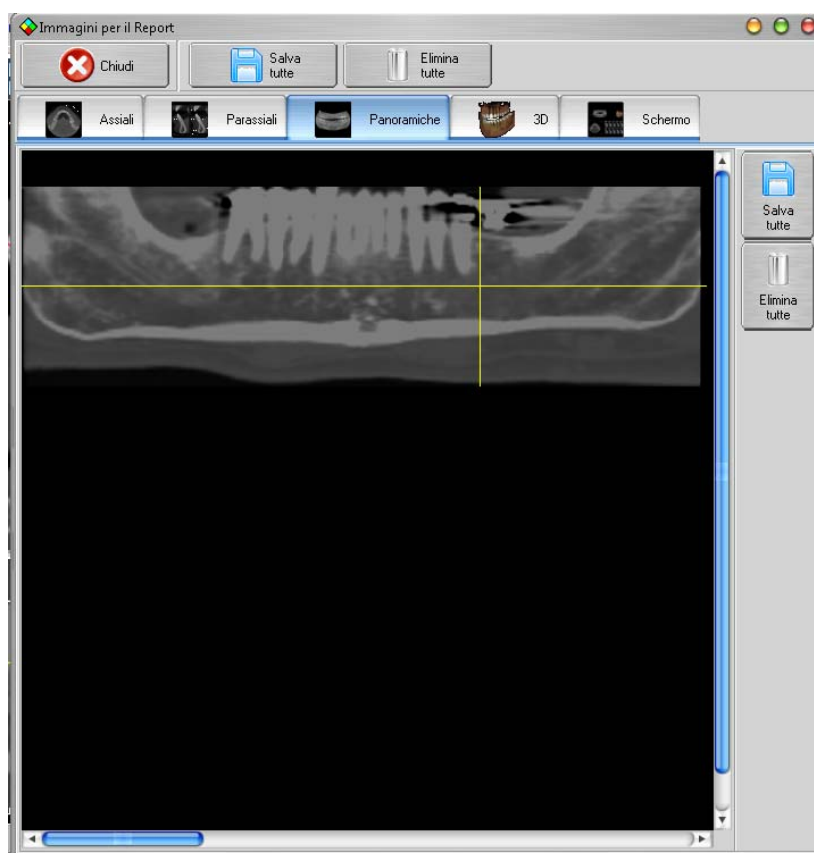


Pic. 7.25

Picture number 7.16, show all captured images.

To save all the captured image for the selected category you can click on “Save All” on the right of the screen.

To delete all the captured image for the selected category you can click on “Delete All” on the right of the screen.

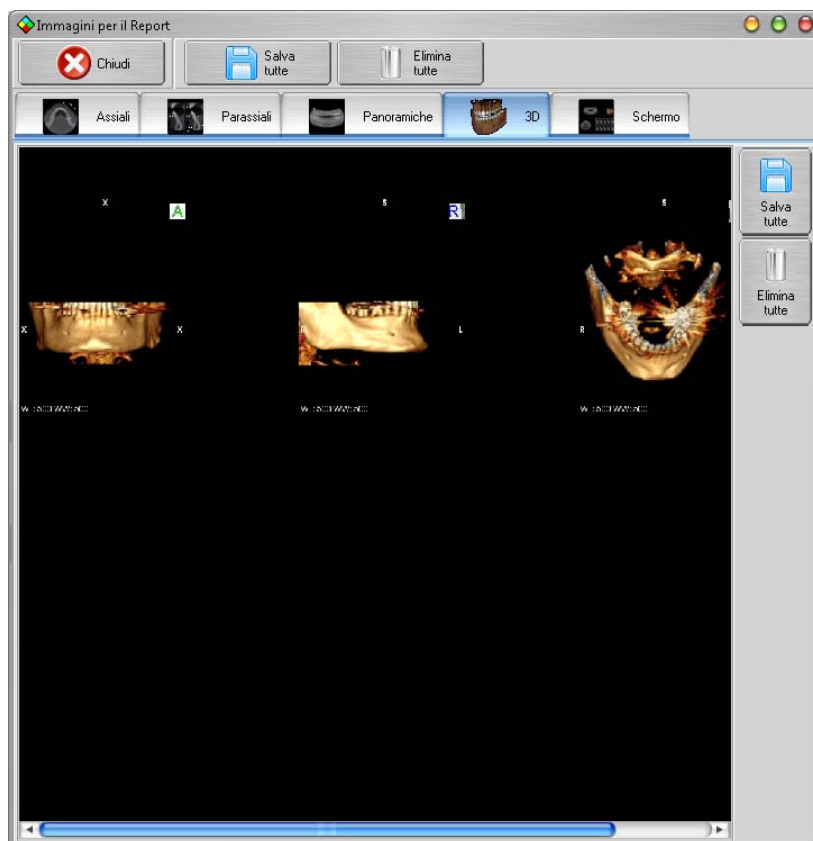


Pic. 7.26

Picture number 7.17, show all captured images of panoramic plane.

To save all the captured image for the selected category you can click on “Save All” on the right of the screen.

To delete all the captured image for the selected category you can click on “Delete All” on the right of the screen.

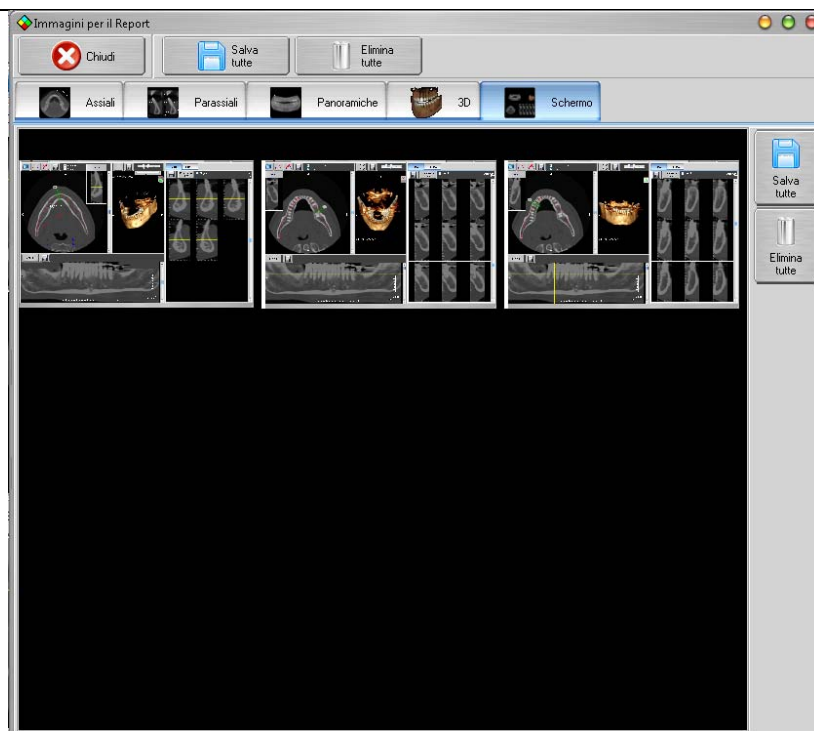


Pic. 7.27

Picture number 7.19, show all captured images of 3D view.

To save all the captured image for the selected category you can click on “Save All” on the right of the screen.

To delete all the captured image for the selected category you can click on “Delete All” on the right of the screen.



Pic. 7.28

Picture number 7.17, show all captured images of the screen.

To save all the captured image for the selected category you can click on "Save All" on the right of the screen.

To delete all the captured image for the selected category you can click on "Delete All" on the right of the screen.

Operation on all images of all categories.

To save all the captured image you can click on "Save All" on the top of the screen.

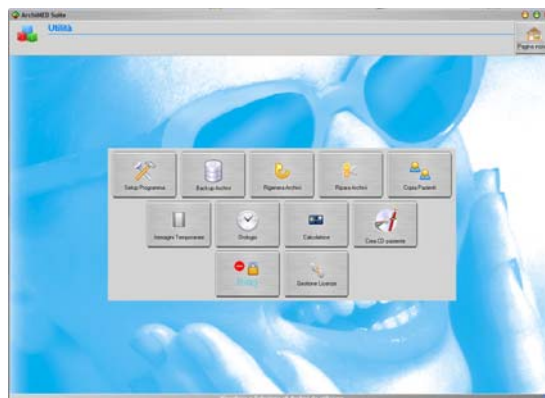
To delete all the captured image you can click on "Delete All" on the bottom of the screen.

8. UTILITIES

Utilities



Clicking on this button from the main page of the program, the following window will open:



Pic. 8.1

Utilities are:

- 1) **Program setup**
- 2) **Database backup**
- 3) **Repair database**
- 4) **Copy Patient**
- 5) **Temporary images**
- 6) **Clock**
- 7) **Calculator**
- 8) **Create CD**
- 9) **Privacy**

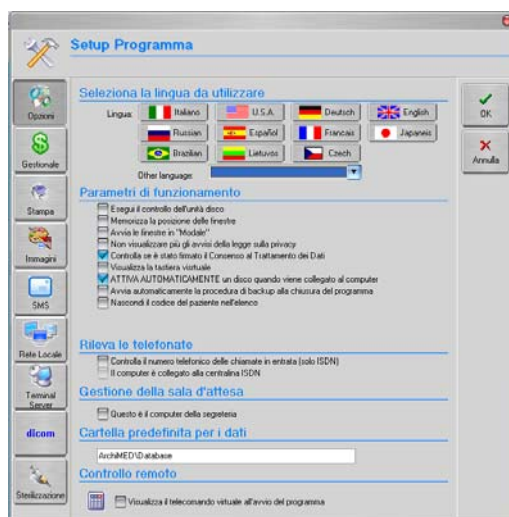


Program Setup



Options

Click on **Program Setup** and the following window will open:



Pic. 8.2

Options: Select language

Clicking with the left mouse button on a specific language, the program will activate the language for all messages on the screen. If the language you want to use is not assigned to a button, you can activate it from a complete list. **Not all the languages are available.**

Options: Operating parameters

Run the check disk drive.

Enabling this option QuickVision DICOM ® performs a continuous test to verify that the selected disks are always available. Suddenly disconnecting a disk, for example, a pen drive, QuickVision DICOM ® ends of use in order to avoid problems on the data stored therein.

Stores the location of the windows.

Stores the location of the main windows so that, when you open again them, they return to the last position in which they appear.

Activate windows "Modal".

This parameter is normally active, causes each newly opened window blocks the previous window. Opening the page of the treatments, for example, the main page will be blocked until the closing of the treatments. This option is available only if you have more than one monitor connected to the same computer. However, we do not recommend using this feature if you are not experienced users of Windows®.

Do not display alerts the Privacy.

This option allows you to show or hide the warnings and the provisions relating to the Privacy.

Check if you have signed the Consent to Treatment of Data

Check if the patient has signed the consent to the processing of Data. To update this option when the patient signs the consent, you must open the change in the patient's chart, and then set the new value.

Displays the virtual keyboard.

View a virtual keyboard that allows you to write using a mouse.

Activate automatically when a disc is connected to the computer.

We have introduced a new feature that makes it even easier disk management: the self- recognition of a new disk connected to your personal computer.

When you connect the disk to the computer (such as a thumb drive or connect a network drive) QuickVision DICOM ® will recognize it automatically and will ask you if you want to use it as a disk archive additional to those already active.

If you have connected a new disc, QuickVision DICOM ® will prepare the disk in order to make it usable. To enable this feature, normally active, you have to open the "Setup program ".

Options: Notice phone calls

Check the phone number of incoming calls (ISDN only).

By activating this function, QuickVision DICOM® displays the phone number of the incoming call, and if the telephone number is associated with a patient card, it also displays the patient's name. To use this feature, you must meet the following requirements: ISDN modem connected to the ISDN, Caller ID service activated with your service provider.

Options: Waiting room management

This is the Secretary computer.

Check this box only on the Secretary computer and only if you want to manage the waiting room. The computer that enable this function receives messages from other computers on the network when they want to call a patient, who is in the waiting room.

Options: Remote control

If you activate this function, the program, at next start, will display the telecontrol of the following picture.

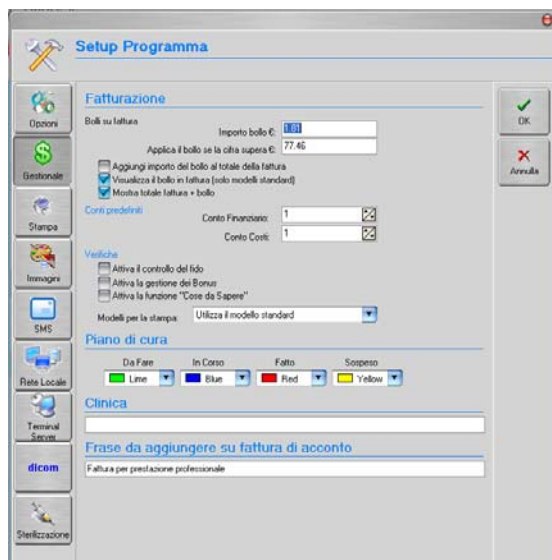


Pic. 8.3



Options: Management

Clicking on this button, you enter in the operating parameters page of administrative management.



Pic. 8.4

Options: Billing

Mark on bill.

With this procedure, you can set the amount of the mark on the bill. "Mark Amount €" means the cost of the mark in current value; "Apply the mark if the amount exceeds €" indicates what is the minimum amount to apply the mark.

Add mark value to the amount of the bill.

Add mark value to the amount of the bill, sum it to the final cost.

Show mark on a bill.

If you select this function, you will display the amount of the mark on the bill print.

Show total cost: bill + mark.

If you select this function, you will display the amount of the mark and the amount of the bill together.

Options: Default Accounts

Financial account.

It is the default financial account to assign the proceeds of recessed bills from patient (case / bank).

Costs' account.

It is the bill called "Revenues from patients." This value is used in the recording of the first note to the receipts of bills.

Options: Checks

Active control of the credit line.

If enabled, it checks whether the work performed at each patient exceeds the credit limit assigned to the patient. If so, automatically appears a warning dialog to the selection of the patient outside the credit line.

Active bonus management.

The management of the bonus is part of a series of instruments introduced in QuickVision DICOM® for managing marketing study.

The bonus is a loyalty bonus: the patient is more faithful to the study, the more rewarded.

The prize can be automatically calculated by assigning it to each treatment. You can enter in the list of treatments, a bonus for those treatments that you want to reward.

For example, if you want to reward patients who regularly perform teeth cleaning in the studio, give this treatment a €10 bonus. Each time the patient will perform this treatment, the new bonus will be assigned to him.

To achieve a goal, you can set to use the accumulated bonus for a free treatment or to make a tribute to the patient. If you choose the gift, you should refer to the tastes of the patient, to amaze him about the care you dedicate to your patients.

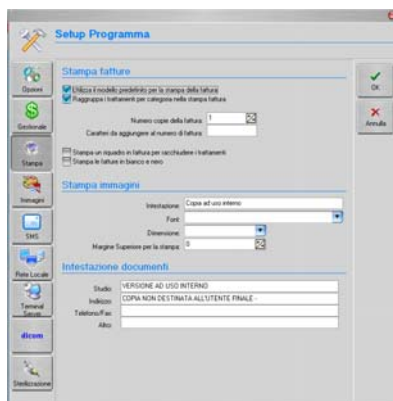
Active the funtion “Things you should know”.

This feature, when activated, displays® all the important information that you should know when you open QuickVision DICOM: deadlines payments and receipts, reminders, etc.



Options: Print

If you click on this button, the window with print parameters will open:



Pic. 8.5

Options: Print bills

Use defined model to print the bills.

The recent legislation for the protection of privacy has introduced some changes about the production of paper documents.

The default template of the bill, prepares the press in accordance with requirements established by the regulations.

If this model does not satisfy your requirements, you can still create a custom template and use it according to your needs.

Group treatments for class in bill print.

Still referring to the legislation of privacy protection, a printed bill should contain the details of the treatments only if specifically requested by the patient.

The patient has to countersign the printed bill with details of all treatments, to avoid you incurring in the penalties provided by law.

Number of bill copies.

Indicates how many copies of the bill you want to print. This option is used to print both the standard model and the custom one.

Characters to be added to the bill number.

Specifies one or more characters to be added to the bill number when you print it. This option is useful if you have two separate billings with the same header VAT number or tax identification number. You may have a non-linear numbering between the two billings, giving an additional letter to one of them and any other letters such as "/A" to the other. You can then have the bills 100, 101, 99 / A, 100 / A, etc.

Of course, this overlap of bill numbers is not possible within the same store, but only between two files or two separate computers.

Options: Print images

Heading

Header to be used in printing the images (can not be changed).

Font.

Name of the font character to be used.

Size

Size of the character you want to use.

Top margin for printing

Indicates how much space to leave at the beginning of the page before printing the image.

Options: Documents heading

Studio: name to be used in the header of the document (you can not change it).

Address: address to use in the header of the document (you can not change it).

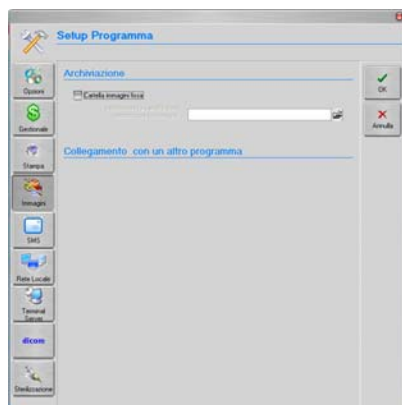
Phone / Fax: Phone / fax to use in the header of the documents.

Other: notes you want to report in the header of the documents.



Options: Images

If you click on this button, you will enter in the settings of storing images on a disk.



Pic. 8.6

Storage

The file format is ignore for the Dicom store file format option.

Image database fixed **WARNING! If you do not know the exactly functioning of this function, don't active it!**

This option makes you able to divide the image database from the personal data of the patient database. The one reason for active this function, is little drive capacity. If you use a ZIP drive or a USB drive as archive, it is possible that you fill in low time, if you save the image too. For this reason, you can decide to save the image in the internal hard disk, and the personal data in an external one. When you active this function you have to specify the directory address to save the images. QuickVision DICOM® will save all the images in this directory, separating for patient.

Here you have an example:

We activate this option and we select C:\Images as destination file.

Now we can free work on the drive. If the selected USB drive that can have letter "F" from unit drive list, that's the consequent:

- QuickVision DICOM® will save all the patient data on the selected drive (F);
- In C:\Images it will create a subdirectory that will have as name a code assigned from the software;
- All the images will be saved in the created file (C:\Images\Drive Code).

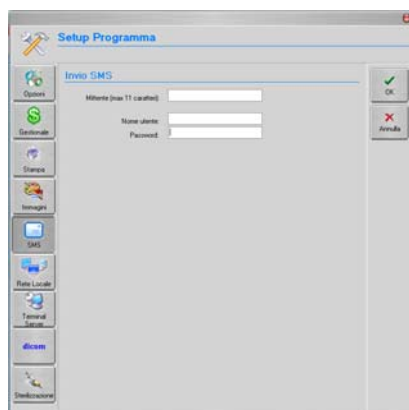
Important: after the activation of this option, QuickVision DICOM® will manage all the drive in the same way. If in your drive, you just have some images, please call the customer care service.

Connection with other software

It permits the image management activation, through another software. Generally, the external software are the applicative supplied with the X-Ray system. For more details, please contact the customer care service.



Options: SMS



Pic. 8.7

Sender.

Indicates the default name of the sender to use when you send a message. The sender can be customized from time to time.

User name

User Name defined in the contract for sending text messages. This name will be provided at the time of conclusion of the contract.

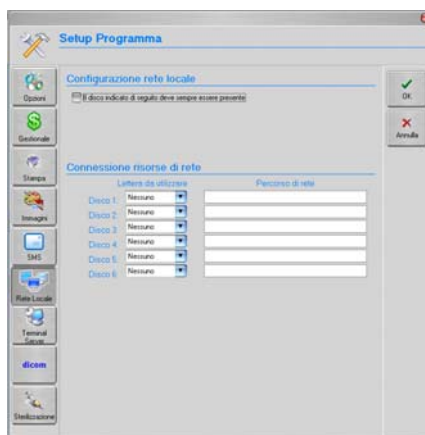
Password.

Password defined in the contract for sending text messages. This password will be provided at the time of conclusion of the contract.



Options: Local network

This function consents to set up local network as you can see in the following window:

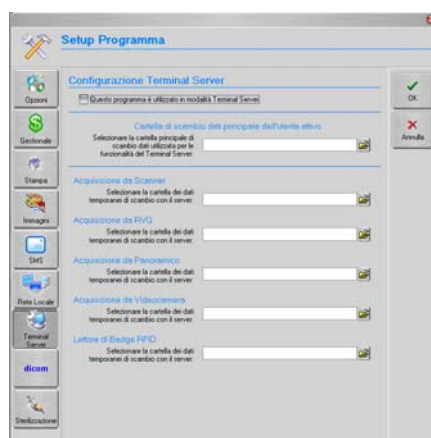


Pic. 8.8



Options: Terminal Server

This function consents to set up the computer, if you use the program in Terminal Server, as you can see in the following window:



Pic. 8.9



Options: Dicom

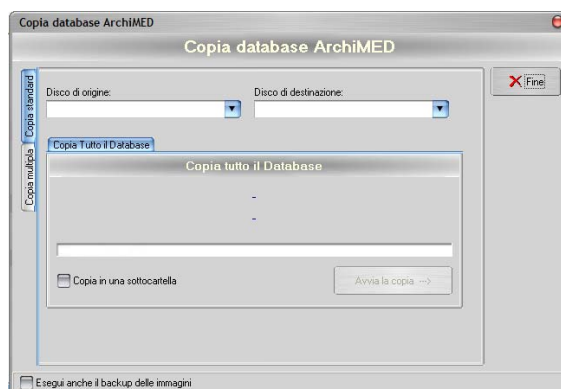
This button allows you to configure the Dicom printer, the Work List and the Dicom Store.

To set these parameters, refer to the instructions of the network technician or anyway to a computer specialist.



Backup Database

Click on **Backup database** and you will see the following window:



Pic. 8.15



ADVICE:

We advise you to perform the backup of the data every day. This will make your job safer over whether to make you to respect how it is foreseen by the norms on the privacy.

You have the possibility to make the QuickVision DICOM® data backup; in this way, in critical moment, you can restore all your data.

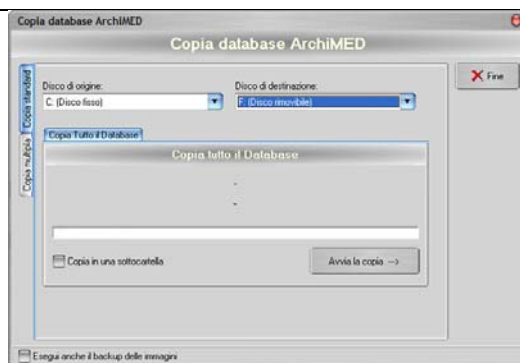
WARNING: we suggest you to do a backup of your database every day!

Original source: it indicates the letter identification of the drive that contains the images to save.

Destination drive: it indicates the letter of the drive where to save all the data.

Copy all the database: it specifies that the database will be copied in the destination drive. The destination drive is not a CD, but it can be only a local drive, a network drive, a pen drive, a zip, a jaz, etc. In any case, the destination disk cannot be a rewritable disk or a CD RW.

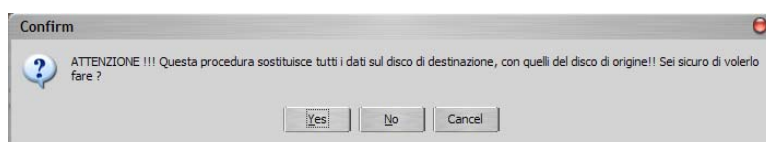
Select the origin disk and the destination one as you can see in the following example.



Pic. 8.16

THE DESTINATION DISK MUST HAVE ENOUGH SPACE TO CONTAIN THE INFORMATION THAT YOU WANT TO SAVE.

To start saving, click "Start copying". QuickVision DICOM® will make you two requests before proceeding with the copy.



Pic. 8.17



Pic. 8.18

Saving created with this procedure creates the data so that they can be used directly by QuickVision DICOM®. The rescue operation is then a copy of the data.

The time required to perform the copy depends on the amount of data you need to save and the speed of the disks and/or the network.

Subdirectory copy

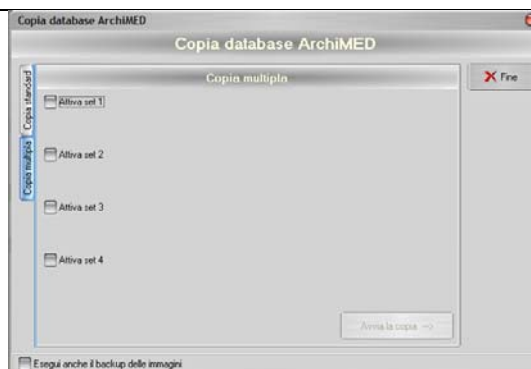
This option allows you to select a destination folder for saving within the target disk. This allows you to have a single disc save a multitude of bailouts. For example you can save the disk S in the "Disk D" of the target disk (e.g. disk F, the letter F is purely indicative), and save the contents of the C drive in the folder "C drive" of the target disk.

Standard copy

This option runs the standard copy of a file at a time. We suggest that you use this option for everyday use.

Multiple copy

Backs up in a planned way, multiple original databases on more destination disks. This feature simplifies the copy of all used databases avoiding to select one by one.



Pic. 8.19

This function is particularly useful if your database is organized across multiple disks. For example:

- The drive "C" contains patients in care;
- The disk "D" contains patients with treatment ended;
- The disk "E" contains orthodontic patients;
- And so on.

The procedure of "Copy Multiple" is able to perform up to four saves at the same time.

Each save set must be activated by clicking the box "Enable the set...". When you turn each set, QuickVision DICOM® displays the parameters to run that single in set. Below is an example.



Pic. 8.20

In the example above, QuickVision DICOM® will perform a complete backup of the data contained in the "C drive" and copy them into the folder "D: \ Disk C". The destination folder can be any folder and can be selected with the "..." button on the right side of the box.

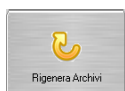
All settings specified in the backup program will be stored on disk, ready to be reused later.

To save, click "Start copying". Under each save set, there is a visible bar to indicate the progress of the copy.

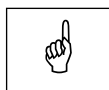
This procedure may also be slow. The duration of this procedure depends on: the size of the files, disk speed, the speed of local area network (if the disc is in the network).

Start copy

Start copy with selected parameters.



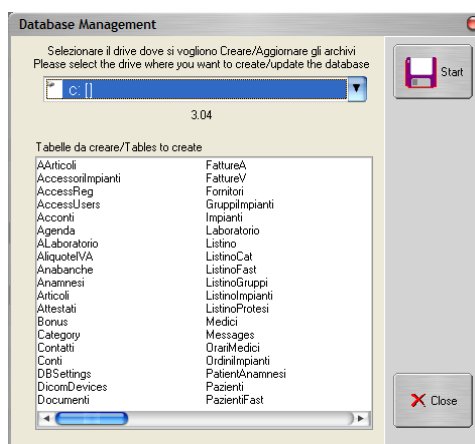
Restore database



NOTE:

The restore of database run a backup of the data before the actual regeneration. In this way preserves the security of the data in case of failure of the regeneration procedure.

Click on **Restore database** and you will see the following window:



Pic. 8.21

With this option, you can upgrade your databases. Just select the drive in which you want to create / update the files and click on the Run button.

The program will proceed to a quick scan of all the items on the screen and automatically perform the necessary updates.

If everything is ok, near to each table name, you will find the word "OK".

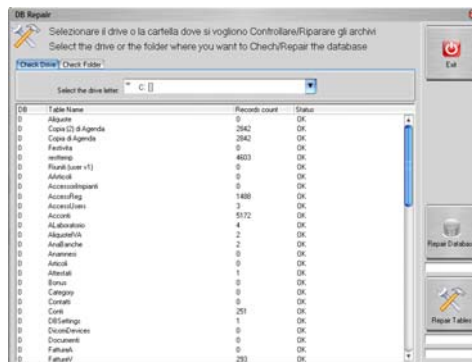
Once you have completed the process, click on the Close button.

You can activate this function more easily selecting the discs. For more information, please refer to "Disk Management".



Repair Database.

Click on **Repair Database** and you will see the following window:



Pic. 8.22

Through this option, you can perform the repair of your files if they are damaged. Just select the drive and choose to repair database or tables. Once you have completed the process, click Exit.

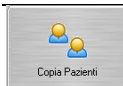
Before using this procedure, you must close QuickVision DICOM® on all computers of the network.

Repair Database

Repair database if it is damaged.

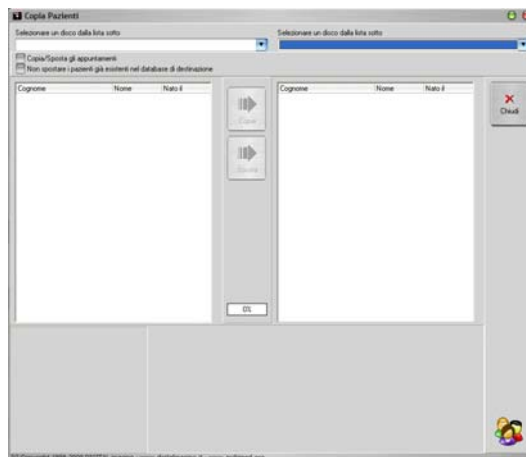
Repair Tables

Repair tables used from QuickVision DICOM® on the selected disk.



Patient copy.

Click on **Patient Copy** and you will see the following window:



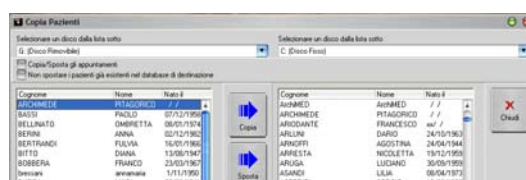
Pic. 8.23

Through this procedure, you can copy or move a patient from one disk to another.

Proceed selecting the data source disk from the list of available disks; the list of all patients there are on the disc selected will appear.

Select the destination disk on which you want to copy or move one or more patients. The destination disk cannot be the same as the source.

Select the patient you want to copy / move starting from the disc and click Copy / Move as you can see in the following picture.



Pic. 8.24

During the copy, if QuickVision DICOM® finds that the patient already exists on the destination disk, it asks you if you want to refresh the data. Similarly, if you find a plan of care or other existing data (clinical diary, appointments, etc.) it asks you what you want to do. There are always more than one very detailed answer. Be careful to choose the correct option, since the copy once done cannot be undone.



Create a CD for the Patient.

You can use this procedure only if you do not activate Dicom images view. Click on **Create a Cd fot the Patient** and you will see the following window:



Pic. 8.25

With this function, you will have the opportunity to prepare a CD to give to your patient with all the images and data he cares about. The CD will be burned directly from QuickVision DICOM®.

The preparation of the images is done in the procedure of the images. For more details, refer to the section dedicated to images.

9. APPENDIX

APPENDIX - Digital sensors that can be connected to QuickVision DICOM®

QuickVision DICOM® captures images directly from digital sensors, divided into the following tables according to the type of sensors.

The table also specifies the versions of the computers' systems that we have used to verified QuickVision DICOM®; this limitation depends on the manufacturer/supplier of the digital system and not on the program.



ADVERTENCE:

For more safety, please contact our service center to check the compatibility of the image acquisition system with QuickVision DICOM® and with the computer system.

INTRAORAL VIDEORADIOGRAPHY

Manufacturer	Version	Type	Computer Systems
BlueX Imaging	4.5.0.0	DigitOs X	Windows XP
	1.3.0.0	DigitOsX2	Windows Vista 32 bits
	1.0.0.0	BlueX WiFi	Windows 7 32/64 bits
Digident / Orex	1.0.0.1	CD Dent, Combi-X, PaXorama, PaXorama HS	Windows XP
Fimet Oy	0.9.1.0	IOX, IOX2	Windows XP
Gendex	1.4b	DenOptics intraoral	Windows XP
	2.51.0.0	Gendex Visualix	Windows XP Windows Vista 32 bits Windows 7 32 bits
Kodak	2.1.2.0	CR 7400	Windows XP Windows Vista 32/64 bits Windows 7 32/64 bits
Novaxa S.p.A CSN Industrie	1.0.0.0	RX2 Senso	Windows XP Windows Vista 32/64 bits Windows 7 32/64 bits
	2.2.0.0	RX2 Mega PX	Windows XP
	2.1.0.4	RX2 HP	Windows XP Windows Vista 32/64 bits Windows 7 32/64 bits
	2.1.0	RX 4	Windows XP pro – S Pack 2 Windows Vista 32/64 S Pack 1 Windows 7 32/64 S Pack 1
	2.1.0	RX 5	Windows XP pro – S Pack 2 Windows Vista 32/64 S Pack 1 Windows 7 32/64 S Pack 1
Schick Technologies	2.1.0.0	Schick versione ISA	Windows XP

	4.5.0.0	Schick Technologies usb	Windows XP Windows Vista 32/64 bits Windows 7 32/64 bits
Sopro / Acteon	1.39.0.0	Sopix	Windows XP Windows Vista 32 bits Windows 7 32 bits
	6.02.0.0	PSPIX	Windows XP Windows Vista 32/64 bits Windows 7 32/64 bits Windows 8 32/64 bits
Soredex	No number version	Digora intraoral	Windows XP
Trophy Italia	2.2.0.0	Trophy 3/4/5/Gold	Windows XP
Various		TWAIN	Windows XP Windows Vista 32/64 bits Windows 7 32/64 bits
Visiodent	1.0.0.0	RSV HD	Windows XP Windows Vista 32 bits Windows 7 32 bits
FONA	1.0.0.0	AnyScan	Windows XP Windows Vista 32 bits Windows 7 32/64 bits
	4.5.0	CDR	Windows XP Windows Vista 32/64 bits Windows 7 32/64 bits
	4.5.0	CDR ELITE	Windows XP Windows Vista 32/64 bits Windows 7 32/64 bits

PANORAMICS

Manufacturer	Version	Type	Computer Systems
BlueX Imaging	12.00.00	PantOs XP	Windows XP Windows Vista 32 bits Windows 7 32 bit
	3.0.301.3356	PantOs DG Plus	Windows XP Windows Vista 32/64 bits Windows 7 32/64 bits
CR Tech	1.0.0.0	CR Tech	Windows XP Windows Vista 32 bits Windows 7 32 bits
Digident / Orex	1.0.0.1	CD Dent Combi-X PaXorama PaXorama HS	Windows XP
Elektron	1.0.2.0	DR XSpeed	Windows XP
Gendex	1.4b	DenOptics panoramic	Windows XP

	2.51.0.0	Various models	Windows XP Windows Vista 32 bits Windows 7 32 bits
Kodak	2.1.2.0	CR 7400	Windows XP Windows Vista 32/64 bits Windows 7 32/64 bits
	2.1.2.0	Xspeed2 CR XSpeed	Windows XP Windows Vista 32/64 bits Windows 7 32/64 bits
Morita	2.1.2.0	Morita 2D	Windows XP Windows Vista 32 bits Windows 7 32 bits
Owandy	1.3.7.8	I MAX Plus	Windows XP Windows Vista 32 bits Windows 7 32 bits
	1.3.7.	I MAX Easy I MAX Touch	Windows XP Windows Vista 32 bits Windows 7 32 bits
Vari		TWAIN	Windows XP Windows Vista 32/64 bits Windows 7 32/64 bits
Novaxa	1.3.7.8	PanoMax 70	Windows XP Windows Vista 32 bits Windows 7 32 bits
Villa Sistemi Medicali	1.3.7.8	Strato D Rotograph D Rotograph Evo	Windows XP Windows Vista 32 bits Windows 7 32 bits
	1.0.0.0	ROTOGRAPH EVO 3D	Windows XP Windows Vista 32 bits Windows 7 32 bits
BlueX Imaging / Ajat	6.12.6	PantOs ART Plus	Windows XP Windows Vista 32/64 bits Windows 7 32/64 bits
FONA	3.0.0	PantOs DG Plus NET	Windows XP Windows Vista 32/64 bits Windows 7 32/64 bits
	GigEVision 1.90.01.0057 Sapera 7.10.1.1018	FONA XPan 3D	Windows 7 64 bits, Windows 8 64 bits

3D PANORAMICS

Manufacturer	Version	Type	Computer Systems
Owandy test SDK	1.0.0.0	I-Max Touch 3D	Windows XP Windows Vista 32 bits Windows 7 32 bits
Villa Sistemi Medicali	1.0.0.0	Rotograph EVO 3D	Windows XP Windows Vista 32/64 bits Windows 7 32/64 bits

Bronnikov Algorithm	2.1.1.0	Rotograph Evo 3D	Windows XP Windows Vista 32 bits Windows 7 32 bits
FONA	GigEVision 1.90.01.0057 Sapera 7.10.1.1018	FONA XPan 3D	Windows 7 64 bits, Windows 8 64 bits

Various test reports

Manufacturer	Version	Type	Computer Systems
Digital Imaging		EVO Tray	Windows XP, Windows Vista, Windows 7
Digital Imaging		Volumetric reconstruction module	Windows XP, Windows Vista 32 bits, Windows 7 32/64 bits
Digital Imaging		RT Test Monitor	Windows XP Windows Vista 32 bits Windows 7 32 bits
Digital Imaging		PAN Villa reconstruction test report	Windows XP Windows Vista 32 bits Windows 7 32 bits
Digital Imaging		Virtual Keyboard test report- EVO 3D Villa	Windows XP Windows Vista 32 bits Windows 7 32 bits
Digital Imaging		SDK test report for Owandy	Windows XP Windows Vista 32 bits Windows 7 32 bits
Digital Imaging		Test report for valuation of images diagnostic quality	Windows XP Windows Vista 32 bits Windows 7 32 bits
Digital Imaging		Test report for efficiency of digital filters	Windows XP Windows Vista 32 bits Windows 7 32 bits
Digital Imaging	3.16.0	InVivoDental.exe	Windows XP Windows Vista 32 bits Windows 7 32/64 bits
Digital Imaging		Windows 8 validation	Windows 8 32/64 bits

APPENDICE 2 - Controls for install and periodic controls

The following steps are necessary to ensure proper use of the system and to control the quality of scanned images.

CONTROLS FOR INSTALL



NOTE:

- o The operations provided after installation of the system are necessary to check the complete functionality of the program.
- o These operations must be repeated after a new installation of the program, for example, to replace the PC.

Check monitor adequacy.



ADVICE:

The good quality of the monitor is an essential requirement for a correct diagnosis of the exam by image analysis. A monitor that fails the checks required by this procedure should not be considered diagnostic. The use of a non-diagnostic quality monitors makes QuickVision DICOM® a non-diagnostic system.

During construction, it was verified that the program QuickVision DICOM® properly view images, using a set of sample images specified by the European Standards.

Given that the program is distributed as a stand-alone product, you must repeat the tests to verify the adequacy of the system monitor on the end user.

To verify this, QuickVision DICOM® has some sample images, used in the initial check, already stored in the program itself.

You have to follow these general performance:

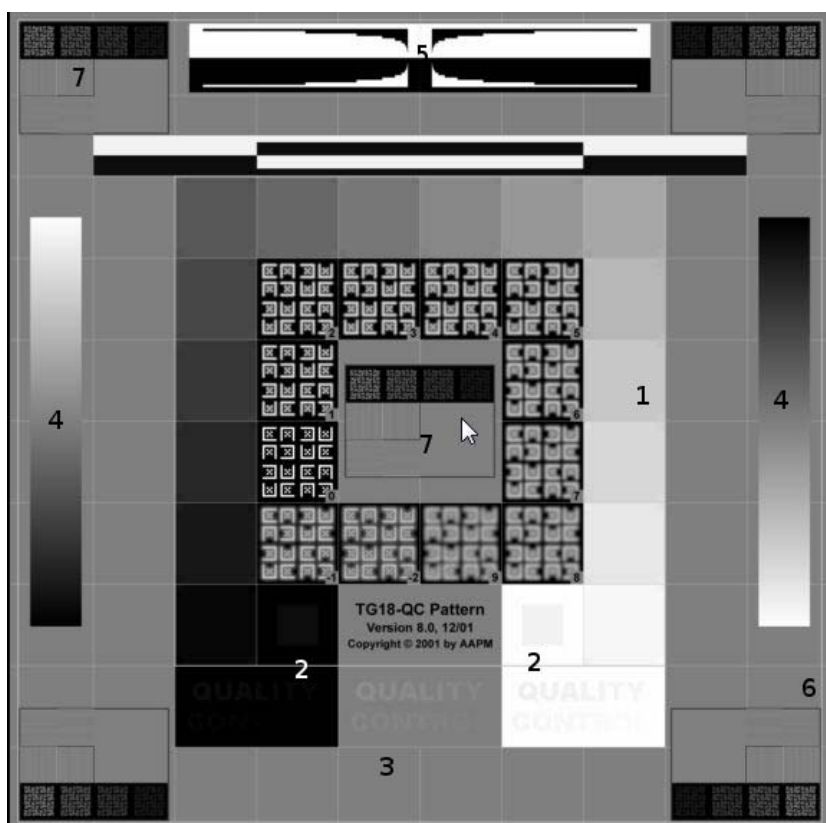
- monitor, most of all the CRT ones, must be on from half an hour almost;
 - light does not have to reflect on the monitor;
 - monitor must be clean.
1. Start QuickVision DICOM®, select Patients and a patient already stored in the database.
 2. Select images and in the new window, the folder “Utilities” as you can see in the following picture.



1. Now select “Test Monitor”



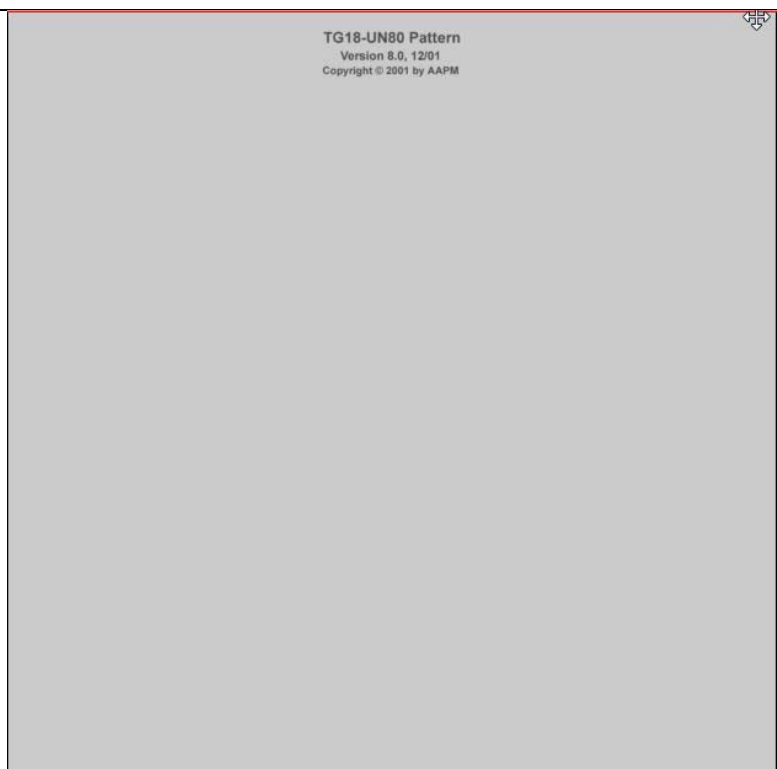
- In the new window, select “Overall quality”; the sample image TG18-QC will appear. Check if that all elements on the left of the screen are correct; the following image show the elements you have to check.



NOTE:

You have to check the point number 7 with a CRT monitor or a LCD with Antireflective screen.

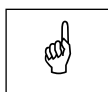
- Select “Luminance uniformity”; it will appear the sample image TG18-UN 80, where you have to check the absence of non-uniformity on the entire image.



Testing the spatial resolution systems for intraoral

To check this, you need to have a puppet of spatial resolution. Scanned images should not be adjusted in contrast and brightness.

1. Start QuickVision DICOM®, select images and create a new patient (for example “Periodical Test”).
2. Put the puppet next to the sensor, to cover the entire sensible area. The sensor and the puppet must be in contact with the cone collimator, so that they are in the centre of the ray beam.
3. On the generator control RX, select the less possible exposure time.
4. If necessary, enable the acquisition of the sensor and the exposure.
5. Verify that the resulting image is exposed correctly, otherwise increase the exposure time and scan them again. If it is overexposed, increase the distance between the sensor / phantom and collimator.
6. Repeat the verification of the correct exposure; possibly repeat steps 4 and 5 above
7. Awarded the correct image, you may want to delete old images.
8. Enlarge the image and see the pairs of lines that are clearly visible. If necessary, you can adjust the contrast and brightness for optimal viewing.
9. Annotate the image with the parameters with which you ran the show (date of implementation, exposure time, distance to fire-sensor, presence of additional filters and their characteristics, spatial resolution observed).



NOTE:

1. You have to do this test on every RX generator that will use the digital sensor.
2. If you use two or more digital sensor, you have to do the test on every one of them, discerning the images of every sensor.

Test of spatial resolution for panoramic systems.

The panoramic systems have some differences dependent on the manufacturer; in particular the form of the dental arch, the fixing system of the patient, etc.

For this reason, the verification of the spatial resolution of the system must be performed using the puppet of specific test and according to the manufacturer's instructions.

You have to proceed in the following way:

1. Start QuickVision DICOM®, select the images and create a new patient (for example “Periodical tests”, if does not exist yet).
2. Put the specific puppet of the system.
3. Select the exposure parameters recommended by the manufacturer of the panoramic.
4. Enlarge the image and check that the characteristics described by the manufacturer are followed.
5. Annotate the image with the parameters with which you ran the show (date of execution, the parameters used, presence of additional filters with value characteristics, the results obtained)

PERIODICAL TESTS

During the lifetime of the system, the controls specified below shall run with the frequency indicated for each of them.

Checking the consistency of the monitor

Test of the adequacy of visualization should be performed annually.

You must perform the same procedure described in the paragraph.

You must obtain the same results described for the initial verification of the system.

If you notice a degradation of visual performance, call the Technical Support Service, but you must consider that the degradation can be attributed to the monitor and not to QuickVision DICOM®.

Test of spatial resolution

The control of the spatial resolution should be performed every six months, for both intraoral systems for panoramic systems.

You must perform the steps corresponding to the digital system under consideration.

You must get the same results described for the initial verification of the system.

If you notice a degradation of visual performance, call the Technical Support Service, but you must consider that the degradation can be attributed to the monitor and not to QuickVision DICOM®.

APPENDIX 3 - Customize print

Customize print.



ADVICE:

This feature is designed for a user who is handy to know that prints and create a procedure containing fields and variables. The result of creating a print template or modifying an existing one by a non-expert user, it may cause malfunction or may produce a print is not consistent with the original image and give unexpected results on the size. In any case, the image stored on the hard disk remains unchanged.

QuikVision DICOM® can only check that the commands have the correct syntax, but can not control the results of the customizations are correct.

Responsibility for the results of release is exclusive to those who created it.

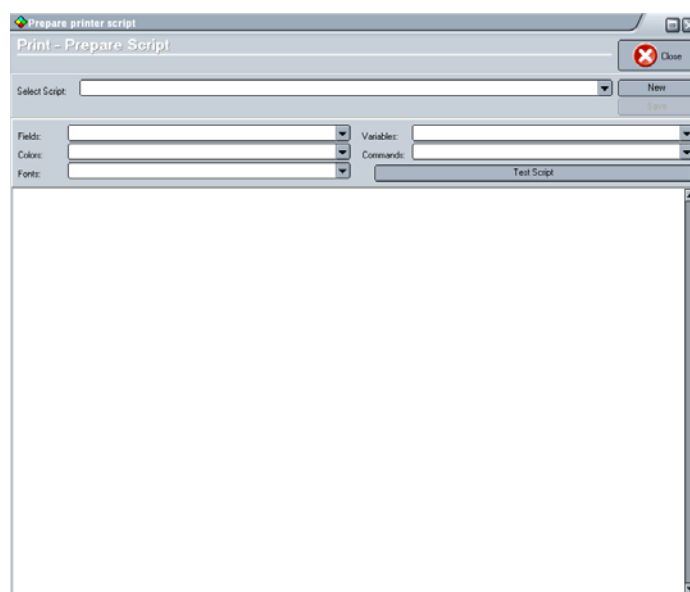
Access to this function is restricted to the administrator of the program.

Introduction.

To enter the customization of prints use the button located inside the module image, in the utility page: Settings.



Clicking on that button, the following window will open:



Pic. App3.1

On the top of the window you can select an existing template to test it or to change it. If you select an existing template its contents will be shown at the bottom of the window.

The "New" button allows you to create a new model.

The "Save" button allows you to save the displayed model . If the model does not have a name yet , you will be prompted when saving . This name will be visible during print preview. We suggest you save the templates with names that are representative of their content. For example, the pattern " Ceph A4 portrait" will indicate the pattern to print the images Ceph on A4 portrait and so on. The button " Test Script " allows you to visually check the results of your script. In the simulation, the inclusion of the image is always used the same image . The result obtained in the printing stage may be different from that expected .

The customization of prints allows you to create any type of custom print format. And 'possible to print a single image for processing 2D prints, desired magnification and the presentation graphics preferred. And 'possible to create printing personalization even for images from 3D processing.

The customization of printing involves the use of:

Controls: are a group of functions that are used to build the graphical part of the print pattern.

Variables are values that change depending on the context of use of the print pattern.

Fields: are references to values associated with the images and the clinic.

Colors are the colors used in the context of the controls.

Commands.

Here you are a list of all necessary commands to print customization.

Box	Draw a box with the given coordinates using the color set with the command "CanvasColor"
CanvasColor	Sets the color that will be used by commands to draw
DefineMultiImageArea	Determine a box where you can enter the drawing 3D images to be printed
Font	Sets the font of the font to use and style
Line	Draw a line in the required position
NewPage	Sets the size of the printing sheet
PenStyle	Select the style of the pen used to draw lines
PutCenteredImage	Inserts the image into the box indicated by the coordinates
PutExtLogo	Inserts the logo of the clinic by reading it from a bitmap file or jpeg
PutImage	Insert the image at the specified position with the characteristics specified by the parameters
PutLogo	insert the logo of the clinic by reading it from a bitmap file or jpeg
TextCentered	Writes a text, using the font style selected with the command "Font" within a rectangle
TextOut	Writes a text using the font style selected with the command "Font"

Variables

Below are listed all the variables that can be used to customize the print template.

PaperW	Specifies the horizontal size of the paper read by the printer settings when you print. During the creation of the model, this value is indicated by the setting bed NewPage command.
PaperH	Specifies the vertical size of the paper read by the printer settings when you print. During the creation of the model, this value is indicated by the setting bed NewPage command.

Fields

Below are listed all the fields that can be used to customize the print template. These fields are used in commands to write texts.

<Patient>	Represents the value of name and surname of the patient
<PatientBDate>	Represents the value of the birthdate of the patient
<PatientSex>	Represents the value of the sex of the patient
<PatientAccNum>	Represents the value dell'Accession Number examination of the patient
<PatientCode>	Represents the value of the Code of Patient
<ExamDate>	Represents the value of the exam date
<ExamTime>	Represents the value of the hour exam
<ExamKV>	Represents the value of KV exam
<ExammA>	Represents the value of mA exam
<ExamDAP>	Represents the value of the dose of the exam
<ExamUID>	Represents the value of UID exam
<ExamNotes>	Represents the value of the notes to the exam
<ExamExpTime>	Represents the value of the exposure time of the exam
<ExamType>	Represents the value of the type of exam performed
<ClinicName>	Represents the value of the name of the Clinic
<ClinicAddress>	Represents the value of the address of the Clinic

Colors

Here you are the list of the colors you can use:

BLACK
MAROON
GREEN
OLIVE
NAVY
PURPLE
TEAL
GRAY
SILVER
RED
LIME
YELLOW
BLUE
FUCHSIA
AQUA
LTGRAY
DRGRAY
WHITE

Command	Box
Use	Creation and execution of the script
Parameter	Left: indicates the position on the left of the box in millimeters Top: indicates the position at the top of the box in millimeters Right: shows the position to the right of the box in millimeters Bottom: indicates the position at the bottom of the box in millimeters
Example	Box (0.0, 0.0, PaperW, 20.0) <i>Draw a box from the top left of the sheet, the sheet width up to a height of 20 mm.</i>

Description

This command draws a box at the specified coordinates using the color set with the command "CanvasColor." The edge of the box will be drawn using the color "Foreg" set in the command "CanvasColor." The background of the box will be drawn using the color "backg" set in the command "CanvasColor." The definition of the coordinates can be of numeric type, or a reference to the variables: PaperW (width of the page) or PaperH (height of the page).

Parameters

Left: shows the position in millimeters of the leftmost point of the box. This value is expressed in the format xx.yy (e.g. 1.2 indicates that the box will be drawn at a distance of 1.2 mm from the left edge).

Top: indicates the position in millimeters of the highest point of the box. This value is expressed in the format xx.yy (e.g. 12.50 indicates that the box will be drawn at a distance of 12.50 mm from the upper edge).

Right: shows the position in millimeters of the rightmost point of the box. This value is expressed in the format xx.yy (e.g. 100.0 indicates that the box will be drawn at a distance of 100.0 mm from the left edge).

Bottom: indicates the position in millimeters of the lowest point of the box. This value is expressed in the format xx.yy (e.g. 200.0 indicates that the box will be drawn at a distance of 200.0 mm from the upper edge).

<i>Command</i>	CanvasColor
<i>Use</i>	Creation and execution of the script
<i>Parameters</i>	ForeG: Indicates the foreground color BackG: Indicates the background color
<i>Example</i>	CanvasColor (Black, Red) <i>Select the black color to draw the lines and red for the filling of the box.</i>

Description

This command sets the color that will be used by the commands for drawing. The colors to be selected are two: the foreground color and background color. The foreground color is used when drawing lines; the background color is used, for example, to fill the box.

Parameters

ForeG: Indicates the foreground color (e.g. black)

BackG: Indicates the background color (e.g. white).

Command	DefineMultiImageArea
Use	Creation and execution of the script
Parameters	ImageZoom: indicates the magnification to be applied to all images ImageSpace: indicates the horizontal and vertical space to leave between the images Left: shows the position in millimeters to the left top of the box that contains the images Top: indicates the position in millimeters at the top of the box that contains the images Right: shows the position in millimeters to the right of the box that contains the images Bottom: indicates the position in millimeters at the bottom of the box that contains the images
Example	DefineMultiImageArea (0.5, 2.0, 0.0, 25.0, PaperW, 200.0) Define a printing area for images with 50% zoom (they will be reduce by half), with a space of 2 millimeters between every image and the coordinates of the area are: 0, 25, PaperW (larghezza pagina), 200.

Description

This command causes a box to insert images. This command can only be used for printing images captured with the 3D module. Used to print the axial, the cross, the cuts drives, etc. This command automatically determines the number of pages needed to print all the selected images.

Parameters

ImageZoom: indicates the magnification to be applied to all images. In order not to apply any magnification must indicate "1.0". A value less than "1" reduces the image, while a value greater than "1" enlarges the image.

ImageSpace: indicates that space will be left between the images. This value is used for the horizontal and vertical space.

Left: shows the position in millimeters to the left of the box that contains the images. This value is expressed in the format xx.yy (eg 1.0 indicates that the reference box is at a distance of 1.0 mm from the left edge).

Top: indicates the position in millimeters at the top of the box that contains the images. This value is expressed in the format xx.yy (eg 10.0 indicates that the reference box is at a distance of 10.0 mm from the top edge).

Right: shows the position in millimeters to the right of the box that contains the images.

Bottom: indicates the position in millimeters at the bottom of the box that contains the images.

Command	Font
Use	Creation and execution of the script
Parameters	Name: The name of the font you want to use. The name of the font should be present between those installed. Size: Indicates the size of the font to use Color: indicates the color of the font to use Bold: Indicates whether you want to use the bold 0: Do not use; 1: Use Italic: Indicates whether you want to use italics 0: Do not use; 1: Use Underline: Indicates whether you want to use the underlined 0: Do not use; 1: Use
Example	Font ("Trebuchet MS", 72, Red, 1, 0, 0) Select the fonts "Trebuchet MS" size 72, using only the bold

Description

This command sets the font of the font to use, and its style . The selection of the font will be used by all commands that write texts. To use more than one font character in the same script, use this command multiple times.

Parameters

Name: indicates the name of the font you want to use (such as Arial) . The font name must be enclosed in double quotes. And ' advisable to use font "True type " that are scaled with a better effect than other fonts .

Size: Displays the size of the font you want to use (eg 10) .

Color: indicates the color of the font you want to use (for example, Black) . The colors that you can use are as follows : Black , Maroon , Green , Olive , Navy , Purple , Teal , Gray, Silver , Red , Lime , Yellow , Blue , Fuchsia , Aqua, LTGray , DRGray , White.

Bold: Indicates whether you want to use bold font. To select bold enter the value 1, otherwise enter 0.

Italic: Indicates whether you want to use the italic style of the font. To select italic enter the value 1, otherwise enter 0.

Underlined: Indicates whether you want to use the underline style of the font. To select the underline style insert the value 1, otherwise enter 0.

Command	Line
Use	Creation and execution of the script
Parameters	Left: indicates the position on the left of the line in millimeters Top: indicates the position on the top of the line in millimeters Right: indicates the position on the right of the line in millimeters Bottom: indicates the position on the bottom of the line in millimeters
Example	Line (0.0, 110.0, PaperW, 110.0) <i>Draw a horizontal line from the left edge and 110 mm from the top edge, across the width of the sheet.</i>

Description

This command draws a line in the required position. The style and size of the drawn line is determined by the command " Penstyle ," while the color is determined by the " CanvasColor " with the parameter " Foreg ."

Parameters

Left: shows the position in millimeters of the leftmost point of the line. This value is expressed in the format xx.yy (eg 1.2 indicates that the line will be drawn at a distance of 1.2 mm from the left edge) .

Top: indicates the position in millimeters of the highest point of the line. This value is expressed in the format xx.yy (eg 12.50 indicates that the line will be drawn at a distance of 12.50 mm from the upper edge) .

Right: shows the position in millimeters of the rightmost point of the line. This value is expressed in the format xx.yy (eg 100.0 indicates that the line will be drawn at a distance of 100.0 mm from the left edge) .

Bottom: indicates the position in millimeters of the lowest point of the line. This value is expressed in the format xx.yy (eg 200.0 indicates that the line will be drawn at a distance of 200.0 mm from the upper edge) .

<i>Command</i>	NewPage
<i>Use</i>	Only during the creation of the script. Ignored during the printing process
<i>Parameter</i>	Width: shows the width in millimeters of the print Height: shows the height in millimeters of the prin BGColor: indicates the background color of the page
<i>Example</i>	NewPage (210.0, 297.0, BLACK) <i>Create a new page the size of an A4 sheet of paper with black background color.</i>

Description

This command is essential in creating the print pattern. Must be specified as the first command in the script and should be similar to the corresponding value of the paper on which shall be deemed to print. If you use many print sizes you need to create multiple scripts . This command is ignored when printing . The actual size of the print is read automatically by the printer selected.

Parameters

Width: it indicates the horizontal size of the print . This value is expressed in millimeters in size xxx.yyy (eg 210.0) . To separate the integer part from the decimal point to use the symbol , not the commas.

Height: it indicates the vertical size of the print . This value is expressed in millimeters in size xxx.yyy (eg 210.0) . To separate the integer part from the decimal point to use the symbol , not the commas.

BGColor: Indicates the background color of the page . And ' possible to specify the background color that you want (for example, Black) . The colors used are: Black , Maroon , Green , Olive , Navy , Purple , Teal , Gray, Silver , Red , Lime , Yellow , Blue , Fuchsia , Aqua, LTGray , DRGray , White.

<i>Command</i>	PenStyle
<i>Use</i>	Creation and execution of the script
<i>Parameters</i>	Size: Indicates the pen width in millimeters Style: Indicates the pen style
<i>Example</i>	PenStyle (5.0, 0) <i>Select a pen of 5 millimeters thick continuous</i>

Description

This command selects the style of the pen used to draw the lines. Setting the style of the pen is used for all commands graphic design.

Parameters

Size: Indicates the pen width in millimeters. This value is expressed in millimeters in size xx.yy (eg 2.5 indicates that the lines drawn will have a thickness of 2.5 mm).

Style: Indicates the style to use to draw the lines. Pen styles used are the following:

- 0: solid line
- 1: dotted line
- 2: dotted line
- 3: dash-dot line
- 4: dash-dot-dot line

Command	PutCenteredImage
Use	Creation and execution of the script
Parameters	ImageIndex: indicates the number of the image. Must always be "0" (zero) Left: shows the position in millimeters to the left of the box that contains the image Top: shows the position in millimeters to the top of the box that contains the image Right: shows the position in millimeters to the right of the box that contains the image Bottom: shows the position in millimeters to the bottom of the box that contains the image Zoom: indicates the magnification applied to the image HorzRuler: Indicates whether to insert the horizontal ruler image VertRuler: Indicates whether to insert the vertical ruler to the image
Example	PutCenteredImage (0, 0.0, 20.0, PaperW, 150.0, 1.0, 1, 1) <i>Inserts an image, centering the rectangle with coordinates in millimeters: 0, 20, PaperW (leaf width), 150. Magnification is 100% and are placed both rulers.</i>

Description

This command inserts the image into the box indicated by the coordinates . If the image is smaller than the box indicated , it will be centered inside the box. If the image is larger than the box indicated , will be trimmed by centering it in the box indicated .

Parameters

ImageIndex: indicates the number of the print image . This number must always be "0 " (zero).
Left: shows the position in millimeters to the left of the box that contains the image. This value is expressed in the format xx.yy (eg 1.0 indicates that the reference box is at a distance of 1.0 mm from the left edge).

Top: indicates the position in millimeters at the top of the box that contains the image. This value is expressed in the format xx.yy (eg 10.0 indicates that the reference box is at a distance of 10.0 mm from the top edge).

Right: shows the position in millimeters to the right of the box containing the picture.

Bottom: indicates the position in millimeters at the bottom of the box containing the picture.

Zoom: ndicates the magnification applied to the image. In order not to apply any magnification must indicate "1.0". A value less than "1" reduces the image, while a value greater than "1" enlarges the image.

HorizRuler: Indicates whether you want to insert the horizontal ruler. To insert the horizontal ruler indicate the value 1, otherwise enter 0.

VertRuler: Indicates whether you want to insert the vertical ruler. To insert the vertical ruler to indicate the value 1, otherwise enter 0.

<i>Command</i>	PutExtLogo
<i>Use</i>	Creazione ed esecuzione dello script
<i>Parameters</i>	FileName: indica il nome del file sul quale è salvato il logo Left: indica la posizione sinistra del logo Top: indica la posizione in alto del logo Right: indica la posizione destra del logo Bottom: indica la posizione in basso del logo
<i>Example</i>	

Description

This command allows you to insert the logo of the clinic by reading it from a bitmap file or jpeg. The position of the logo is indicated by the coordinates of the box that includes the logo. The logo will be printed at its actual size and centered in the box indicated. If the evidence is too large, you can reduce it with a graphics program.

Parameters

FileName: The name of the file where you saved the logo that we intend to enter (eg "C: \ Logos \ ClinicLogo.bmp ").

Left: shows the position in millimeters to the left of the box that contains the image. This value is expressed in the format xx.yy (eg 1.0 indicates that the reference box is at a distance of 1.0 mm from the left edge) .

Top: indicates the position in millimeters at the top of the box that contains the image. This value is expressed in the format xx.yy (eg 10.0 indicates that the reference box is at a distance of 10.0 mm from the top edge).

Right: shows the position in millimeters to the right of the box containing the picture.

Bottom: indicates the position in millimeters at the bottom of the box containing the picture.

Command	PutImage
Use	Creazione ed esecuzione dello script
Parameters	ImageIndex: indica il numero dell'immagine. Deve essere sempre "0" (zero) Left: indica la posizione sinistra dell'immagine in millimetri Top: indica la posizione superiore dell'immagine in millimetri Zoom: indica l'ingrandimento da applicare all'immagine HorzRuler: indica se inserire il righello orizzontale all'immagine VertRuler: indica se inserire il righello verticale all'immagine
Example	PutImage (0, 100.0, 25.0, 0.8, 1, 1) Disegna l'immagine numero "0" partendo da 100 millimetri dal bordo sinistro e 25 da bordo superiore. L'ingrandimento applicato all'immagine è dell'80% (l'immagine verrà ridotta) e saranno inseriti entrambi i righelli

Description

This command inserts the image at the specified position with the characteristics specified by the parameters. This command does not check the size of the image so that the image may be cut off if it finishes off the page. The magnification allows you to print images in 1:1 format.

Parameters

ImageIndex: indicates the number of the print image. This number must always be "0 " (zero).

Left: shows the position in millimeters to the left where to draw the image. This value is expressed in the format xx.yy (eg 1.0 indicates that the image is drawn at a distance of 1.0 mm from the left edge).

Top: indicates the position in millimeters at the top where to draw the image. This value is expressed in the format xx.yy (eg 10.0 indicates that the image is drawn at a distance of 10.0 mm from the top edge).

Zoom: indicates the magnification applied to the image. In order not to apply any magnification must indicate "1.0". A value less than "1" reduces the image, while a value greater than "1" enlarges the image.

HorizRuler: Indicates whether you want to insert the horizontal ruler. To insert the horizontal ruler indicate the value 1, otherwise enter 0.

VertRuler: Indicates whether you want to insert the vertical ruler. To insert the vertical ruler to indicate the value 1, otherwise enter 0.

<i>Command</i>	PutLogo
<i>Use</i>	Creation and execution of the script
<i>Parameters</i>	FileName: The name of the file where you saved the logo Left: the left indicates the position of the logo Top: indicates the position at the top of the logo
<i>Example</i>	PutLogo ("C:\Loghi\ClinicLogo.bmp", 2.0, 2.0) <i>Read the image contained in the file "C: \ Logos \ ClinicLogo.bmp" and puts it in the position 2 mm from the left edge and 2 mm from the top edge</i>

Description

This command allows you to insert the logo of the clinic by reading it from a bitmap file or jpeg. The position of the logo is indicated by the coordinates. The logo will be printed at its actual size. If the evidence is too large, you can reduce it with a graphics program.

Parameters

FileName: The name of the file where you saved the logo that we intend to enter (eg "C: \ Logos \ ClinicLogo.bmp").

Left: shows the position in millimeters to the left where to draw the logo. This value is expressed in the format xx.yy (eg 1.0 indicates that the image is drawn at a distance of 1.0 mm from the left edge).

Top: indicates the position in millimeters at the top where the logo design. This value is expressed in the format xx.yy (eg 10.0 indicates that the image is drawn at a distance of 10.0 mm from the top edge).

Command	TextCentered
Use	Creation and execution of the script
Parameters	Left: shows the position in millimeters to the left of the box that contains the text Top: shows the position in millimeters to the top of the box that contains the text Right: shows the position in millimeters to the right of the box that contains the text Bottom: shows the position in millimeters to the bottom of the box that contains the text Text: is the text to insert Centered: indicates whether the text is to be centered
Example	TextCentered (0.0, 100.0, PaperW, 110.0, "Paziente: <Patient>", 1) <i>Writes the text, centering, starting at 0 mm from the left edge and 100 mm from the top edge, to end at the right edge of the sheet and 110 mm at the bottom. The written text contains a fixed portion "Patient" and a variable "<Patient>." The variable part will be replaced with the last name and the name of the patient.</i>

Description

This command writes a text, using the font style selected with the command " Font " within a rectangle . The reference rectangle is not drawn but only serves as a reference to the positioning of the text. This command controls the final size of the text and is able to wrap to a new line if the text exceeds the size of the paper. You can use this command to write lyrics that do not change or texts with references to patient data (fields).

Parameters

Left: shows the position in millimeters of the leftmost point of the box that contains the text. This value is expressed in the format xx.yy (eg 1.2 indicates that the box will be calculated at a distance of 1.2 mm from the left edge) .

Top: indicates the position in millimeters of the highest point of the box that contains the text. This value is expressed in the format xx.yy (eg 12.50 indicates that the box will be calculated at a distance of 12.50 mm from the upper edge) .

Right: shows the position in millimeters of the point furthest to the right of the box that contains the text. This value is expressed in the format xx.yy (eg 100.0 indicates that the box will be calculated at a distance of 100.0 mm from the left edge) .

Bottom: indicates the position in millimeters of the lowest point of the box that contains the text. This value is expressed in the format xx.yy (eg 200.0 indicates that the box will be calculated at a distance of 200.0 mm from the upper edge) .

Text: is the text to insert. The text must be enclosed in double quotes and can include the use of **FIELDS**.

Centered: Indicates whether you want to center the text within the rectangle shown. To center the text, enter the value 1 , otherwise enter 0.

Command	TextOut
Use	reation and execution of the script
Parameters	Left: indicates the position on the left of the text in millimeters Top: indicates the position at the top of the text in millimeters Text: is the text to insert
Example	TextOut (5.0, 5.0, "Paziente: <Patient>") <i>Writes the text starting at 5 mm from the left edge and 5 mm from the top edge. The written text contains a fixed portion "Patient" and a variable "<Patient>." The variable part will be replaced with the last name and the name of the patient</i>

Description

This command writes a text using the font style selected with the command " Font " . This command does not control the final size of the text and is not able to wrap to a new line if the text exceeds the size of the paper. You can use this command to write lyrics that do not change or texts with references to patient data (fields).

Parameters

Left: shows the position in millimeters to the left of the point from where to start writing. This value is expressed in millimeters in size xx.yy (eg 10.5 indicates that the text will be written from 10.5 mm from the left edge of the sheet).

Top: indicates the position in millimeters of the top point from where to start writing. This value is expressed in millimeters in size xx.yy (eg 50.0 indicates that the text will be written from 50.0 mm from the top edge of the sheet).

Text: is the text to insert. The text must be enclosed in double quotes and can include the use of FIELDS.

Example of a customized print

Here you have an example of a customized print model. It shows how to stamp on an A4 sheet. This size is the correct one to print a panoramic image.

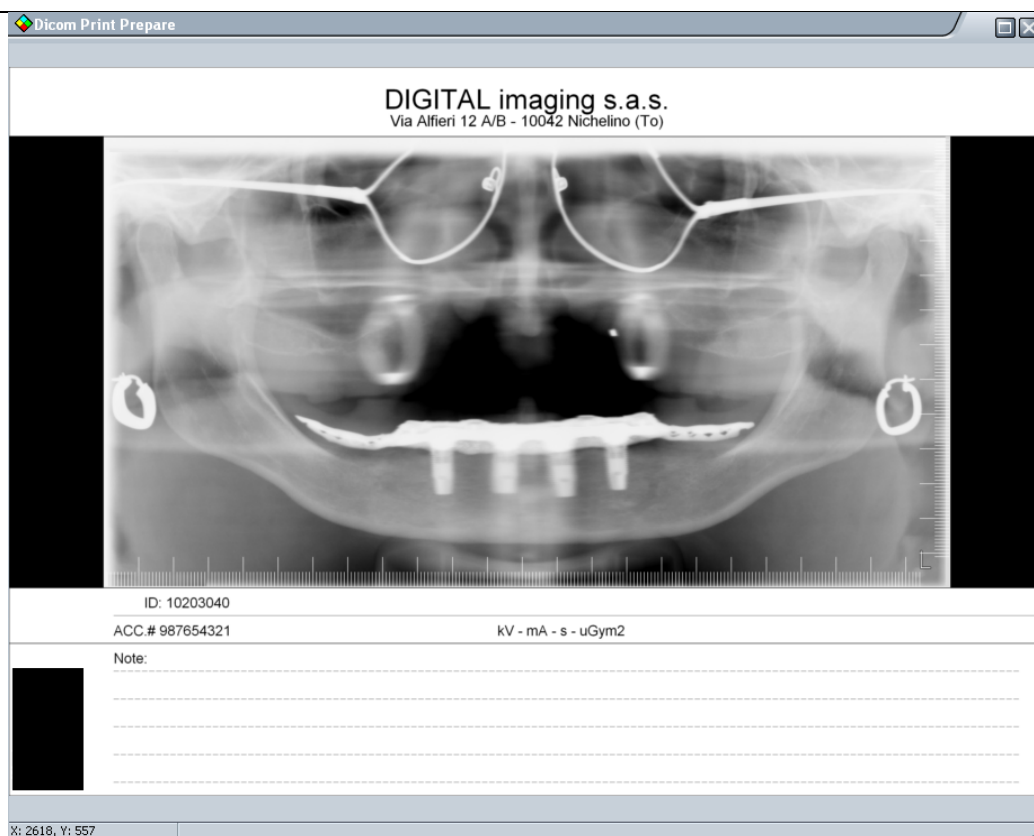
EXAMPLE

```

NewPage (297.0, 210.0, Black)
CanvasColor (Black, White)
Box (0.0, 0.0, PaperW, 20.0)
Font ("Arial", 70, Black, 0, 0, 0)
TextCentered (0.0, 5.0, PaperW, 20.0, "<ClinicName>", 1)
Font ("Arial", 40, Black, 0, 0, 0)
TextCentered (0.0, 13.0, PaperW, 20.0, "<ClinicAddress>", 1)
PutCenteredImage (0, 0, 20, PaperW, 150, 1, 1, 1)
Box (0.0, 150.0, PaperW, 166.0)
PenStyle (0.1, 0)
Font ("Arial", 36, Black, 0, 0, 0)
TextOut (30.0, 152.0, "<Patient>   <PatientBDate>   ID: <PatientCode> ")
TextOut (140.0, 152.0, "<ExamType>   <ExamDate>   <ExamTime>")
PenStyle (0.1, 0)
Line (30.0, 158.0, PaperW, 158.0)
TextOut (30.0, 160.0, "ACC.# <PatientAccNum>")
TextOut (140, 160.0, "<ExamKV>kV - <ExammA>mA - <ExamTime>s - <ExamDAP>uGym2")
Box (0.0, 166.0, PaperW, 210.0)
TextOut (30, 168.0, "Note:")
PenStyle (0.1, 1)
Line (30.0, 174.0, 290, 174.0)
Line (30.0, 182.0, 290, 182.0)
Line (30.0, 190.0, 290, 190.0)
Line (30.0, 198.0, 290, 198.0)
Line (30.0, 206.0, 290, 206.0)

```

In the following picture, you can see the result of commands above.



The image used for the preview is the image in the picture. The result can be different from the preview for the different size of the image.